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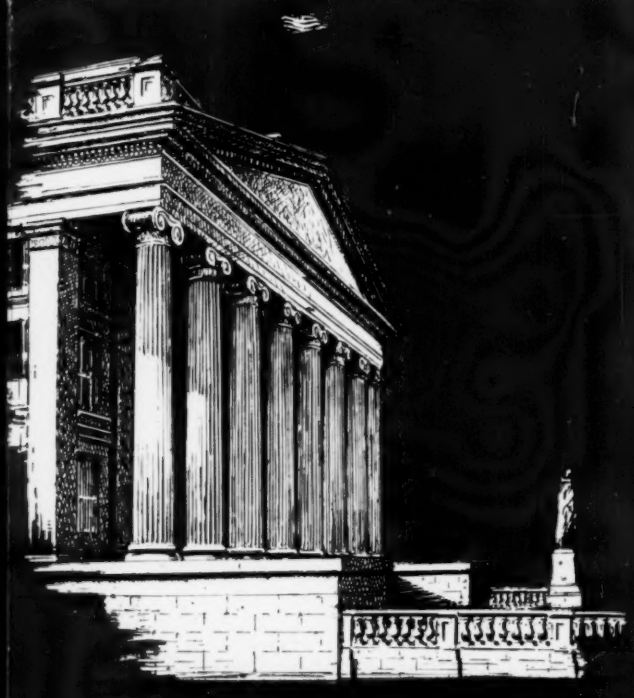

Articles on

- Bank Entry and the Public Interest
- Bank Location and Monetary Policy
- The Monetary Cycle and the Business Cycle
- Reserves for Financial Intermediaries
- Balance of Payments and Foreign Exchanges
- European Capital Markets

- Bank Trust Investments
- Legal and Regulatory Developments
- Banking and Economic Developments
- Book Reviews

THE COMPTROLLER OF THE CURRENCY • UNITED STATES TREASURY

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The NATIONAL BANKING REVIEW

A JOURNAL OF POLICY AND PRACTICE

VOLUME 1, NUMBER 4, JUNE 1964

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►DAVID C. MOTTER and DEANE CARSON

This is one of a series of studies on banking structure and performance being conducted in the Department of Banking and Economic Research in the Office of the Comptroller of the Currency.

Bank Entry and the Public Interest: A Case Study

I. *Introduction*

In 1960, the New York State Legislature passed the Omnibus Banking Act.[1] One of its provisions opened the suburban counties of Nassau and Westchester to entry by New York City banks. With the absolute legal barrier to entry into these populous, rich and fast-growing counties removed for a group of the largest banks in the United States, the stage was set for a rapid expansion of banking facilities. In effect, the Act created a unique laboratory in which to examine the effects on banks and bank customers of a major facilities expansion occurring in a relatively short period of time.

This paper presents the results of our examination of bank expansion in Nassau County. The purpose of our analysis of the interrelationship in Nassau of banking structure, bank operating results and banking performance from the standpoint of bank customers is to shed light on the general problem of formulating public controls over bank entry consistent with the public interest.

The organization of the study is as follows:

In Part II we examine the basic issues involved in the formulation of public

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The authors acknowledge the help of a number of people in the gathering and processing of data for this study. These include Santo R. Lagano, Charles West, Edwin K. Langdon, Jr., Arthur Coe, David Maynard, and Ann McClung.

[1] It was re-enacted in 1961 after its invalidation by the New York Supreme Court on procedural grounds.

controls over bank entry; Part III presents a profile of the economy of Nassau County; changes in the banking structure of Nassau County in the period 1958-1964 are described and analyzed in Part IV, together with an exposition of the relationship between certain economic variables and the banking structure; Part V examines the operating results of the Nassau-based banks in the period 1958-1963, with the aim of ascertaining the impact of the facilities expansion with particular reference to rates of return on investment; Part VI examines the recent performance of the Nassau banking system from the standpoint of bank customers; and Part VII presents our summary and conclusions.

II. *The Basic Issues*

Public control of entry into the banking industry is a firmly established tradition in the United States. Since the experience of the Great Depression, the collective wisdom of our state and national legislatures has been to invest regulatory agencies with broad authority to grant or withhold charters and branch certificates within the limits of State and Federal law.[2]

The exercise of this authority and the underlying law relating to entry vary widely from state to state and between State and Federal jurisdictions. A principal feature of the dual banking system is diversity in the regulation of entry, based not only upon differing statutory provisions, but also upon the manner in which these various statutes are interpreted by duly constituted regulatory authorities. Inherent in the latter are fundamental differences in regulatory philosophy—the basic view of the function of regulation held by the individual or commission to whom authority is delegated.

A. Philosophies of Bank Entry

While it is difficult to classify these philosophies, and much more so to attribute them precisely to any given regulator, some fairly common views on entry can be identified. Most regulatory authorities hold more than one view; the resulting philosophy is usually the product of two or more views weighted in some fashion so that the regulator tends to be identifiable as either liberal or conservative with regard to bank entry. Regulatory attitudes may be classified as follows:

1. The sole function of regulation of entry is to protect the profits of existing institutions. A variation of this view is that entry should be restricted in order to avoid demands upon the Federal Deposit Insurance Fund; no bank should ever be placed in jeopardy of failure by new entry, irrespective of how poorly it is performing its functions. These views lead to the idea of exclusive market shares for individual banks—exclusive service territories within which any added

[2] A great amount of interest has been recently generated concerning the feasibility of a return to "free banking." The practical limitations of our investigation preclude discussion of this interesting issue. However, we are examining a situation in which entry into the market became much freer, partly due to a change in the degree of restrictiveness imposed by the regulatory agencies involved. Nevertheless, while it is reasonable to suppose that the amount of capital entering the market in the past four years has been fairly large relative to the amount of potential capital investment that would have been forthcoming under free banking, the results of this study should not be taken as confirmation of any opinion as to the impact of free entry since, in fact, actual conditions were vastly different from those that would obtain under free banking. Not the least of these was the fact of regulated entry under which entry proposals were subjected to intensive examination, a factor that undoubtedly inhibited marginal overtures that would otherwise have been translated into new banking offices.

competition is proscribed. In this extreme view, entry should be severely restricted; new banks or branches are chartered only in areas where their deposits will be generated without encroachment upon the deposits of any other bank. Since this is seldom likely, authorities holding this view are largely inactive in the area of chartering new banks and authorizing branches.

2. Although the viability of existing banks is of paramount importance, the effect of new banks on the profitability of existing banks must be balanced against the needs and convenience of the public. In this view, there is nothing sacred about the market shares of existing banks. Entry proposals are judged on the basis of need for service and convenience of the public relative to the performance in these respects of the existing banks, with the qualification that no entry will be permitted which is likely to cause failure of existing banks.

3. The third view emphasizes the attainment of competitively priced banking services. Differing from (2) above, this attitude places less emphasis upon the effects of entry on the profitability of existing banks and much more on increasing the vigor of competition in banking markets. It also differs from the extreme "free banking" view in that, while emphasizing the goal of achieving active price competition in banking markets, it recognizes a need to avoid a breakdown in the mechanism of monetary payments, which is the weakness traditionally attributed to complete lack of entry controls. Nevertheless, this view does not assume that every bank in the market has a franchise to exist irrespective of its efficiency, its ability to attract customers, and its shrewdness in managing its resources.

In terms of current regulation, the basic difference among regulators would appear to lie in the emphasis they place on (1) and (2). The third view, while not entirely absent from regulatory philosophy in some quarters, has not achieved significant acceptance. This is not surprising in view of the strong tradition, reinforced by the banking crises of the 1920's and 1930's, of protecting the individual bank from failure at any cost.

The third philosophy, it may be noted, attempts to achieve most of the probable benefits of a free banking system without entailing its probable costs in the form of frequent disruptions in the payments mechanism due to widespread insolvency.[3] It envisages an optimal banking market as one in which collusion is impossible or unlikely, where pressures are generated to improve service and lower costs of production, and where many alternative sources of banking services are available, while keeping failure within acceptable limits of tolerance. Such market performance is impossible of achievement in many areas due to the limited extent of the market itself. Nevertheless, it seems clear that the application of this philosophy of entry would be feasible in many banking markets today; whether or not it will become a predominant feature of public regulation of entry should depend upon a realistic assessment of the costs and benefits of the available alternatives.[4]

B. The Entry Route

Banking capital enters a given market through the establishment of new unit banks, through *de novo* branching, and through merger with existing banks. The entry route is of some significance to the

[3] The degree of disruption would depend in part upon deposit insurance arrangements that were adopted, if any.

[4] The literature on this alternative is not large. For the view that current entry restrictions are unsound, see D. A. Alhadeff, "A Reconsideration of Restrictions on Bank Entry," *Quarterly Journal of Economics*, May 1962.

structure of the market and banking competition.

In general, the regulatory authority exercises an influence on these factors at a secondary level. That is to say, the primary responsibility for them devolves upon individual banks and organizers of new banks who make specific proposals which are then acted upon by the regulator. The latter, at least on the national level, never initiates specific proposals. This is not to say, however, that the authorities have no influence on the structure of the market. Obviously, in the process of making decisions, as well as in their known attitudes toward entry in general and routes of entry in particular, the regulatory agencies encourage or discourage the development of particular market structures.[5]

In Nassau County, expansion of individual banks has taken a combination of the three available routes. Franklin National Bank of Mineola, to cite a leading example, expanded initially via the merger route and, in more recent times, through *de novo* branches. Since 1960, New York City banks have entered the market through both *de novo* branches and mergers. Finally, two new banks have been chartered during the past four years.

The competitive effects of alternative entry routes are superficially simple to delineate. In fact, they are quite complex and not unambiguous. Two points, however, may be made. First, *de novo* branching, from the public interest standpoint, may yield one advantage over the merger route as a means of entering a market; it entails a net gain in the number of competitors, while the merger route either reduces or does not change the number. However, the public interest in assuring efficient banking services and in preserving bank viability may make mergers in some circumstances preferable to other forms of entry. This would be true, for example, where economies of scale could not be realized by a new entrant without displacing existing banks, or where, in a market too small to support an additional bank, an existing bank is not serving its market effectively or efficiently.[6]

Secondly, entry of new unit banks generally enhances the competitive environment, although little can be said about its benefits relative to the establishment of branch banks except in specific situations. New banks are usually small relative to the market; their growth requirements, therefore, make them critically aware of local needs, particularly of small businesses and consumers. Expansion of banking capital via this route is particularly desirable as an offset to a reduction in number of banks occasioned by mergers.

C. Overbanking

1. *General concepts*

The word "overbanking" is common in popular discussions of banking markets. Its genesis is as obscure as the concept itself, although it came into widespread usage in the 1920's and 1930's. Today the term is applied not only to specific markets but also to the banking situation in general. Apropos of the present study, it has been contended that either the County is now overbanked or that it soon will be, "if present trends continue."

[5] For example, in disapproving the merger of the National Bank of Westchester with The First National City Bank of New York, the Comptroller of the Currency stated that, in his judgment, "entry of New York City banks into Westchester County should be by *[de novo]* branches . . . and not through the proposed merger." *Annual Report,* 1963, p. 142.

[6] A special case of the above is that of massive entry via acquisition of a large branch system versus the alternative of the establishment of a large number of *de novo* branches.

It would be difficult to generate a commonly acceptable definition of overbanking. To some, it means any condition in which the market must be shared; certainly this is an extreme, although not uncommon, notion. To others, it implies a condition where competition is keen; the economist, who would generally approve of such a condition, finds that bankers distinguish between healthy and unhealthy competition, with the latter being a manifestation of overbanking. Although somewhat vague itself, unhealthy competition commonly means a situation where the individual bank cannot maintain its "traditional" or "customary" share of the market because of new entry. Strangely enough, overbanking is more often related to the market-share concept than to other objective manifestations of competition, such as rates of return on investment.

Finally, the economist relates the concept of overbanking to the theory of production. In banking the inputs are the time and demand deposits and capital generated from the community; in the short-run, given income and relative prices of substitutes, the community is willing to supply a given aggregate amount of such resources to the commercial banks. Over time, this supply will be rising, falling, or stable in any given market and will be shared among the competing banks. The resources available to individual banks are loaned or invested, giving rise to revenues that are supplemented and offset by the returns and costs of deposits, and other costs and revenues associated with the provision of services.

The impact of new entrants into such a market is varied. If total resources in the market are fixed, the impact is different from the case where resources are rising or falling. Assuming fixed resources, the market share of one or more of the previously existing banks will tend to fall; the reduction in their resources will most likely reduce revenues more than costs, not only because of the existence of fixed costs, but also because a loss of time deposits to new banks will entail reduction in high earning assets which will not be completely offset by a diminution in interest costs; furthermore, the loss of demand deposits will reduce service charge earnings *and* the returns from assets based upon these deposits without a compensating decline in the costs of maintaining the demand deposit function. The result of these changes is likely to be a reduction of net earnings and the rate of return to capital. This may be reinforced by increases in the cost of labor, upward pressure on time deposit rates, and reductions in the price of bank loans and services.

Under such conditions, the rate of return will decline, but because of regulated entry, seldom to the point where failures occur. Failures may, of course, occur under other conditions, namely a general decline in aggregate deposits [7] or gross mismanagement of a particular bank's affairs.

This leads us to a final issue: can we afford a modest number of failures of inefficient banks in order to achieve the public benefits of effective competition? Or should the solvency of individual banks take precedence over the possible gains of having a larger number of alternatives facing the consumer of banking services? The economist, the banker, and the regulator are almost certain to answer these questions differently, and certainly those who vividly remember the banking collapse of the 1930's (which, we think,

[7] Friedman and Schwartz contend that the banking crisis of 1929-33 had its roots in a perversely pro-cyclical monetary policy in which the money supply was allowed to contract drastically. See Milton Friedman and Anna Jacobson Schwartz, *A Monetary History of the United States 1867-1960*, Princeton: Princeton University Press, 1963, Ch. VII.

has been erroneously attributed to the relatively free banking period from 1864-1929) may have different views from those who do not.

2. *A performance-related test of overbanking*

Just as overbanking is a somewhat nebulous concept, so is the testing for its existence. Some studies have utilized a highly simplified measure, namely the ratio of population to the number of banking offices. We reject the sole use of this measure for obvious reasons. Not only does such a measure implicitly assume that some never-specified level of population per banking office is "correct" and that deviations from this ratio are meaningful, but it also fails to take into consideration some important factors influencing "the extent of the market"—family income and population age distribution—which determine the number of banking offices.

An hypothesis concerning overbanking should strongly suggest its proper tests. To state that overbanking is present in a given area is to charge that the public authorities with control over bank entry have been delinquent in their duty *to the public* by allowing too many banking offices (branches or newly-chartered banks) to be established. Then it follows that "excess" banking facilities must perforce lead to some public detriment.

What does the public require from the banking system? Banking performance from the standpoint of the bank customers has a number of dimensions (see Part VI) but the essence of adequate performance may be summarized as the continuing availability, from a number of alternative sources, of a full line of high-quality banking products and services at prices reasonably related to costs.

Overbanking, then, must involve such drastic effects on operating results of existing banks and the banking system that adequate performance so defined is threatened.

Therefore, two interrelated tests for overbanking seem in order. First, the operating results of individual banks may be scrutinized to see whether earnings have declined to a point where future adequate performance is imperiled.[8] Second, the actual performance of the system from the standpoint of customers may be examined over a period of time, to determine whether performance is improving or worsening.

We apply both tests to Nassau County. In Part V, the operating results of the Nassau-based banks are analyzed for the period 1958-1963. Part VI presents an analysis of the performance of the Nassau banking system from the standpoint of bank customers for the same period.

III. *The Nassau Economy*

Unlike the United States as a whole, Nassau County experienced a high rate of economic growth over the period 1958-1963. In manufacturing, which constitutes the solid base of the County economy, value added increased by more than one-third between 1958 and 1962.[9] In the same period, manufacturing employment rose from 79,274 to 94,473. As one bank in the area stated in 1962, "(f)or over a decade 'fastest growing'

[8] One defect in this procedure is that, where the market is narrowly defined and branch-banking prevalent, published and available unpublished data on a *bank* do not reveal the performance of individual branches. It is possible, therefore, to overlook bank saturation in a particular market if the banks are generally enjoying high profits; this latter would imply excessive profits and underbanking in some other area or areas. Our analysis by submarkets in Part IV, while not directed primarily at this question, does relate the distribution of banking offices among the subdivisions of the County to the economic base of the subdivisions.

[9] U. S. Department of Commerce, *1962 Annual Survey of Manufactures*, Pt. 2, Middle Atlantic States, p. 8.

Table 1

Population of Nassau County by Town, 1950-1964

Town	1950 Census	1957 Census	1960 Census	Jan. 1962 Est.	Jan. 1964 Est.
North Hempstead	142,613	205,864	219,088	229,645	238,091
Hempstead	448,092	709,066	767,211	789,879	815,962
Oyster Bay	82,060	264,490	313,872	326,874	337,491
Total County	672,765	1,179,420	1,300,171	1,346,398	1,391,544

Source: Long Island Lighting Company, **Population Survey, 1964.** 1962 and 1964 estimates of population are those of LILCO.

has been a synonym for Long Island,"[10] and Nassau County was in the forefront in that growth.

A. Population Characteristics

Nassau County contains three major political units, the incorporated towns of North Hempstead, Hempstead, and Oyster Bay. Table 1 gives the population of these areas for three census years and estimates of their population in 1962 and 1964.

As may be observed from this table, County population nearly doubled between 1950 and 1960, and continued to increase, but at a slower rate, after 1960. The highest rate of growth between 1950 and 1960 occurred in the northeastern segment of the County in the town of Oyster Bay, reflecting the movement of suburban population into areas ever more distant from New York City, and the rapid absorption of agricultural lands and large estates by land developers. Since 1960, the rate of population growth of the three towns has been quite similar.

As might be expected in a rapidly growing suburban area, the median age of the Nassau County population is significantly lower than that of the Standard Metropolitan Area of which it is a part. In New York City, the median ages of male and female populations in 1960 were 34.0 and 36.0 years, respectively, while the same figures for Nassau County were 30.3 and 31.1 years.

Not only is the Nassau County population younger than that of New York City, but it is also better educated. The median of school years completed in 1960 was 12.2 for the former and 10.1 for the latter. Of the population over twenty-five years of age in 1960, 14 percent of the Nassau population had completed four or more years of college; the comparable figure for New York City was 8.2 percent. This was partially reflected in the difference in 1959 median family incomes of the two areas, $5,103 in New York City, and $8,515 in Nassau.

If one were to generalize about the demography of Nassau County, the pattern that would emerge is one of a relatively young, relatively affluent, well-housed, predominantly white population. To a very considerable extent, the County

[10] The Franklin National Bank, *Statistical Abstract of Nassau and Suffolk Counties, Long Island, New York*, 1962.

Table 2

Nassau County Employment by Sector, 1953 and 1962

Sector	1st Quarter 1962	1st Quarter 1953	Change, 1953-1962	
			Number	%
Agriculture	1,190	900	+ 290	32.2
Mining	607	395	+ 212	53.7
Contract Construction	22,985	15,899	+ 7,086	44.6
Manufacturing	92,018	44,372	+ 47,646	107.4
Transportation & Public Utilities	14,408	12,405	+ 2,003	16.1
Wholesale Trade	15,757	5,326	+ 10,431	195.9
Retail Trade	62,460	35,684	+ 26,776	75.0
Finance, Insurance, Real Estate	14,465	6,800	+ 7,665	112.7
Services	44,686	14,256	+ 30,430	213.5
Unclassified	2,215	932	+ 1,283	137.7
Totals	270,791	136,969	+ 133,822	97.7

Source: Department of Commerce, **County Business Patterns,** 1st Quarter, 1953 and 1962.

is a bedroom community,[11] although differing from other such suburbs in that it is also characterized by a substantial indigenous industrial complex.

B. Employment

The economy of Nassau County is considerably diversified, and within the basic manufacturing sector substantial diversification also exists. While there is some concentration in the aircraft and electronics industries, recent additions of new plants and firms point toward the growth of a broad complex of light manufactures.

Table 2 summarizes the employment structure of the County by major activity sectors in 1953 and 1962. Major employment gains in manufacturing, retail trade, and services constitute approximately three-quarters of the total employment gain for the County. Nevertheless, all of the sectors demonstrated substantial percentage gains in employment, indicating balanced growth within the context of a rapidly growing economy.

The manufacturing sector of Nassau County (see Table 3), while reasonably diversified, is strongly supported by two industries, radio and television communication equipment, and aircraft. In 1962, these two industries employed 34.5 thousand workers, or slightly more than one-third of all manufacturing employees other than ordnance. In both 1953 and 1962, aircraft and aircraft parts manufacture employed slightly more than fourteen thousand; the great growth in County manufacturing employment has been in communication equipment which, virtually starting from scratch in the early 1950's, now constitutes the County's

[11] In 1960, approximately 45 percent of employed Nassau residents worked outside the County. Of these, approximately 90 percent worked in New York City.

Table 3

Nassau County Employment in Manufacturing Sectors, 1953 and 1962

SIC	Industry	1st Quarter 1962	1st Quarter 1953	Change, 1953-1962	
				Absolute	%
20	Food and Kindred Products	1,663	842	821	97.5
22	Textile Mill Products	393	593	−200	−33.7
23	Apparel & Related Products	3,622	2,794	828	29.6
24	Lumber & Wood Products	307	572	−265	−46.3
25	Furniture & Fixtures	1,718	1,074	644	60.0
26	Paper & Allied Products	1,755	764	991	129.7
27	Printing & Publishing	6,978	6,270	708	11.3
28	Chemicals & Allied Products	2,463	408	2,055	503.7
30	Rubber & Plastic Products	1,410	—	1,410	—
31	Leather & Leather Products	195	107	88	82.2
32	Stone, Clay & Glass Products	1,397	715	682	95.4
33	Primary Metal Industries	1,417	839	578	68.9
34	Fabricated Metal Products	5,505	3,120	2,385	76.4
35	Machinery, except Electrical	6,361	1,883	4,478	237.8
36	Electrical Machinery	31,189	1,772	29,417	1,660.1
37	Transportation Equipment	14,617	15,065	−448	−3.0
38	Instruments & Related Products	3,705	3,839	−134	−3.5
39	Miscellaneous Manufacturing	2,358	2,673	−315	−11.8
	Totals*	87,053	43,330	43,723	101.0

* Totals do not add to total manufacturing employment in Table 2 because of unreported employment in industries subject to rules of disclosure.

Source: Department of Commerce, **County Business Patterns**, 1st Quarter 1953 and 1962. Data exclude "ordnance."

largest source of manufacturing employment.

It is apparent from the above that Nassau County manufacturing is based upon industries which rely heavily on postwar technological advances. While this is the case, new firms entering the County in the twelve-month period ending October 1963 have been representative of a broad range of manufacturing. Of the sixty-eight firms locating plants in the County during that period, thirty can be identified with such "space-age" industries as aircraft, electronics, research and development, and plastics. The remainder are concentrated in printing and publishing, fabricated metal products and "machinery except electrical." [12]

[12] These data are based upon an industrial classification of new firms in Nassau County contained in *Annual Report* of the Area Development Council of the Long Island Association, 1963 (mimeo).

C. Commuting Patterns

As alluded to previously, a substantial proportion of the employed population of Nassau County commutes to New York City. Of the 450,988 Nassau County workers reporting place of employment in 1960, 182,699 were reported as working in New York City, 248,409 in Nassau County, 13,459 in Suffolk County, 5,030 outside the SMSA, 1,331 in Westchester County and 60 in Rockland County.[13]

On the other hand, over fifty thousand residents of New York City were reported as working in Nassau County in 1960, with a total of 81,114 non-residents reported as employed in the County.

There is, then, a considerable amount of cross-commuting to and from Nassau County. On balance, however, the County is a net exporter of workers, particularly to New York City. The significance of this to the banking structure is twofold. First, it is probable that the commuting pattern leads to a net export of deposits; aside from the sheer weight of numbers, commuters to New York City are more likely to have deposit accounts near their place of work than are New York City residents employed in Nassau and, at the same time, to have larger accounts where they work.[14]

Secondly, however, the movement of population to Nassau from New York City in the past fifteen years affected New York City bank deposits adversely and led to pressures on the State legislature to broaden branching powers which culminated in the Omnibus Banking Act. This, in turn, has generated branching by Nassau County banks into New York City, as the leading banks have sought to compensate for the consequent sharing of County business with City institutions.

IV. *The Banking Structure of Nassau County, 1958-1964*

In this section we first examine structural change as a dimension of banking performance from the consumer standpoint. Next, changes in banking structure for the County as a whole are described for the period 1958-1964. This is followed by a more detailed examination of structural change by submarkets within the County, and an analysis of the relationships between measures of income and population and banking structure. The section concludes with a brief discussion of the effects of "home office protection" on banking structure.

A. Structural Change as a Dimension of Performance

The nature of the relationship between market structure and market performance has long intrigued economists, and will continue to do so, because the relationship is of crucial importance in determining proper public policy toward all industries in which competition is expected to act as a safeguard for consumers. Although a very considerable body of useful work on the structure-performance relationship has been done,[15] it may be

[13] Bureau of the Census, *Censuses of Population and Housing; 1960, Census Tracts*, Final Report PHC(1)-104, Pt. 2, p. 150. 16,235 did not report place of work.

[14] Of course, these assumptions could only be verified by analysis of individual bank deposits in all of the banks involved, a procedure which was not feasible. However, their reasonableness is assured by the rough evidence that "exported" Nassau County workers have higher incomes than those "imported." A considerable number of the latter work in semi-skilled industrial jobs and as domestics, while it would appear that "exported" workers are heavily represented by managerial and professional personnel.

[15] An outstanding example is the work of Joe S. Bain. See his *Industrial Organization*, New York: John Wiley & Sons, Inc., 1959.

Table 4

Number of Commercial Banking Offices* in Nassau County, by Bank, 1958, 1961 and 1964

Bank	1-1-58	1-1-61	1-1-64†
Nassau-based National Banks in existence 1-1-64:			
County National Bank of Mineola	—	—	2
Franklin National Bank	25	32	41
First National Bank of Glen Head	2	3	3
2nd Nat'l Bank & Trust Company, Hempstead	1	1	1
Long Island National Bank	4	7	8
Meadow Brook National Bank‡	29	44	48
Oceanside National Bank	1	1	2
Peninsula National Bank	3	4	5
Valley National Bank	4	6	8
Nassau-based State Banks in existence 1-1-64:			
Community Bank, Lynbrook	—	1	3
Hempstead Bank	9	14	16
Long Island Trust Company	5	11	14
Matinecock Bank	2	2	2
Nassau Trust Company	1	1	3
Bank of Westbury Trust Company	2	3	3
Nassau Banks absorbed, 1-1-58 to 1-1-64:			
Central Bank & Trust Company	4	—	—
Lynbrook National Bank	1	—	—
State Bank of Long Beach	1	1	—
Bank of Rockville Centre	3	3	—
First National Bank of Farmingdale	1	1	—
Fork Neck National Bank	7	—	—
New York City Banks:			
Bankers Trust Company	—	—	3
Chase Manhattan Bank	—	—	6
Chemical Bank	—	—	7
Commercial Bank of North America	—	—	1
First National City Bank	—	—	17
Suffolk Bank:			
Security National Bank of Long Island	—	7	9
Totals	105	142	202†

* Includes limited service facilities with branch certificates.

† Includes eleven offices approved but unopened as of 1-1-64. For detail see Table 10.

‡ Though Meadow Brook's head office is now located in Jamaica, Queens, the bank is treated as a Nassau bank throughout this study.

Sources: Compiled from various reports of Federal and state regulatory authorities and from bank annual reports.

doubted that universally applicable generalizations which obviate the need for case-by-case analysis will ever be derived.

In Part VI below, we examine the performance of the Nassau banking system from the standpoint of bank customers. The dimensions of performance discussed therein are related to the evolution of the Nassau banking structure discussed in this section. However, changes in banking structure are themselves changes in the *"structure dimension"* of performance.[16] Without relying on a strong hypo-

[16] This will be the case in any industry, such as banking, in which a retailing function is per-

thesis concerning the broad structure-performance relationship, the following statements can be made concerning the identity of structure and a performance dimension: (1) any additional banking office will bring added convenience to some group of bank customers; (2) a new office operated by a bank previously unrepresented in the area will give customers an additional alternative source of banking products and services; (3) a new office, especially one operated by a bank heretofore unrepresented, may broaden the banking output available to customers; and (4) entry of a previously unrepresented bank may increase the level of price and service competition, which then results in consumer benefits in the performance dimensions examined in Part VI. These consumer benefits must be weighed by the regulatory authorities, in coming to their decisions on bank entry, against factors possibly adverse to the public interest.

B. Structural Changes for the County as a Whole

At the beginning of 1958, there were 19 commercial banks operating 105 banking offices in Nassau County. (See Table 4.) All 19 were County-based banks; of these, six were unit banks, nine had two to five offices, two had six to ten offices, and the remaining two—Franklin National and Meadow Brook National—accounted for 54 offices, or 51 percent of all commercial banking offices in the County. On the same date there were 27 offices of mutual savings banks and savings and loan associations in the County.

During the period 1958-60 (a period prior to the effective date of the Omnibus Banking Act), the number of commercial banking offices in the County increased by 35 percent, from 105 to 142. These 142 offices were operated by 18 banks, 17 based in Nassau and one based in neighboring Suffolk County. The number of commercial banks operating in Nassau declined from 19 to 18 in the period as a result of three mergers—one of which brought a Suffolk bank into Nassau—and the establishment of one new bank. (See Table 5.) The 17 Nassau-based banks still included six unit

Table 5

Banks Chartered and Mergers Consummated in Nassau County, 1958-1963*

Year	Action
1958	Security National Bank of Long Island (Suffolk County) acquired The Fork Neck National Bank.
	Central Bank & Trust Company (Nassau County) acquired Lynbrook National Bank.
1959	Meadow Brook National Bank (Nassau County)† acquired Central Bank & Trust Company.
1960	Community Bank, Lynbrook, was established.
1961	County National Bank of Mineola was established.
1962	Commercial Bank of North America (New York City) acquired State Bank of Long Beach.
1963	Chemical Bank New York Trust Company (New York City) acquired Bank of Rockville Centre.
	Bankers Trust Company (New York City) acquired First National Bank of Farmingdale.

* This list does not include non-Nassau County banks acquired by Nassau County banks. In this latter category during the period 1958-1963, Meadow Brook National Bank acquired two New York City banks and one Suffolk County bank, Valley National Bank acquired four Suffolk County banks, and Franklin National Bank and Long Island Trust Company acquired one Suffolk County bank each.

† Though the main office of Meadow Brook National Bank is now in Jamaica, Queens, it is treated throughout this study as a Nassau bank.

Source: Office of the Comptroller of the Currency.

formed. An increase or decrease in facilities available itself *directly* affects the adequacy of banking performance from the customer standpoint. In most manufacturing industries, this is much less the case.

banks at the end of 1960. In the same three years, the number of Nassau offices of mutual savings banks and savings and loan associations increased from 27 to 38. By any measure, a major expansion in Nassau banking facilities occurred in the three-year period prior to the Omnibus Banking Act.[17]

The Omnibus Banking Act opened Nassau for entry by New York City banks in 1961, via either the merger or the *de novo* branching route. We have already discussed in Part II the public policy issues involved in the choice between these alternatives. Two early merger applications, Chase Manhattan-Hempstead and Chemical Bank-Long Island Trust, each involving banks ranking among the top five in the County, were turned down by the regulatory authorities.[18]

Following the rejection of these merger applications, several New York City banks, notably First National City, Chase Manhattan and Chemical, embarked on a vigorous program of expansion via *de novo* branching. By January 1, 1964, New York City banks were operating or had gained approval for 29 *de novo* branches, plus five branches acquired by merger. (See Table 4.) Meanwhile the Nassau-based banks continued their branch expansion, adding 27 branches during the period 1961-63. Also, a new bank was chartered in 1961, and it gained approval for a branch in 1963. Nassau-based banks thus added 29 *de novo* offices in the 1961-63 period (including approved, unopened), exactly the same number as were accounted for by New York City banks. These 58 new offices and the two new offices established by a Suffolk County bank led to an increase in Nassau commercial banking offices from 142 on January 1, 1961, to 202 on January 1, 1964, a 42 percent increase. During the same period, the number of Nassau offices of mutual savings banks and savings and loan associations increased from 38 to 53.

Of the six unit banks in operation at the beginning of 1961, two were absorbed via merger and three had established one or more branches, leaving only one unit bank operating at the beginning of 1964. None of the three mergers which occurred in the period 1961-63 led to a reduction in the number of banks operating in the County, as each involved the entry of a New York City bank. With the establishment of a new bank and the entry of First National City and Chase Manhattan via *de novo* branches, the total number of commercial banks with operations in the County increased from 18 on January 1, 1961, to 21 on January 1, 1964.

New York City banks accounted for 34 offices, or about 17 percent of the 202 Nassau commercial banking offices operating or approved as of January 1, 1964. Since eight of these 34 were not yet open as 1964 began and a number of others had been open only a comparatively short period of time, the share of Nassau County deposits held by New York City banks was considerably less than their share of offices. Of total Nassau County deposits on December 31, 1963, of $2.23 billion, the five New York City banks held

[17] One can only speculate about what portion, if any, of this expansion occurred in anticipation of the opening of the County to New York City banks.

[18] The New York Superintendent of Banks approved both mergers, but they were disapproved by the Federal Reserve Board. In December 1961, the Comptroller of the Currency rejected the proposed merger of First National City Bank and the National Bank of Westchester in Westchester County, establishing the principle of expansion via *de novo* branches, where feasible, in preference to massive entry through merger. However, in 1962 and 1963, three smaller mergers with New York City banks were approved. (See Table 5.)

$165.5 million, or 7.4 percent.[19] The top four banks, in terms of deposits, of the 21 operating in Nassau, accounted for 75.8 percent of Nassau County commercial bank deposits.

Franklin and Meadow Brook accounted for 44 percent of the 202 commercial banking offices open or approved as of January 1, 1964. This compares with their figure of nearly 54 percent of offices operating in the County at the beginning of 1961. (See Table 4.) The top four banks in number of offices as of January 1, 1961, accounted for 71 percent of total offices. The top four in number of offices operating or approved as of January 1, 1964, accounted for only 60 percent of the total. The entry of New York City banks during 1961-63 was an important factor in the decline in concentration of banking *offices.*

Table 6 provides a picture of the comparative standing of the Nassau-based banks at the beginning of 1964. The base of the size distribution of deposits, it should be noted, is the total deposit figure for each bank, and thus in the case of the seven County-based banks with non-Nassau operations, cannot be attributed entirely to the County. Franklin and Meadow Brook accounted for 74.8 percent of the total deposits of Nassau-based banks while the figure for the top four banks was 85.2 percent.

In summary, the number of commercial banking offices in Nassau County increased 35 percent in the three years prior to the Omnibus Banking Act and 42 percent in the first three years after application of the Act. The number of offices of mutual savings banks and savings and loan associations increased 40 percent in the first period and 39 percent in the later period. Nassau-based commercial banks accounted for the same number of additional *de novo* offices during the period after application of the Omnibus Banking Act as did New York City commercial banks. Entry by New York City banks led to an increase in the total number of commercial banks operating in the County and to a reduction in the concentration of banking offices. For a more comprehensive and revealing examination of recent changes in the County banking structure, we turn now to an analysis by submarkets within the County.

C. Structural Changes Within Nassau County Submarkets

1. *Defining the submarkets*

The recent Philadelphia bank merger case has generated considerable discussion of "relevant banking markets."[20] It seems clear that from the *economic* standpoint, the relevant geographic area differs for different banking products or services. At the extremes, for example, the market for very large loans is national

[19] We are unable to disclose the Nassau County deposits of individual banks which operate both within and without the County because of the confidentiality of branch deposit figures. As a result, we cannot present a size distribution of the Nassau County banking structure. Table 6 does present a size distribution of the total assets of the Nassau-based banks.

[20] See, for example, David C. Motter, "Bank Mergers and Public Policy," Victor Abramson, "Private Competition and Public Regulation," and Deane Carson and Paul M. Horvitz, "Concentration Ratios and Competition," all in *The National Banking Review,* 1, September 1963; Bernard Shull, "Commercial Banking as a 'Line of Commerce,'" *The National Banking Review,* 1, December 1963. For comments on these views, see Emanuel Celler, "The Philadelphia National Bank Case: A Rejoinder," *The National Banking Review,* 1, December 1963; E. S. Herman, "The Philadelphia Bank Merger Decision and Its Critics," *The National Banking Review,* 1, March 1964; and T. G. Moore, "The Philadelphia-Girard Decision: Some Further Comments," *The National Banking Review,* 1, March 1964.

Table 6

Selected Data for Nassau County-Based Commercial Banks, December 31, 1963

Bank	Number of Offices* in Nassau County	Total Deposits ($000,000)	Total Assets ($000,000)	Percent of Total Deposits of County-Based Commercial Banks†
Franklin National Bank	41	1,079.1	1,272.8	44.3
Meadow Brook National Bank‡	48	744.1	837.7	30.5
Long Island Trust Company	14	158.9	175.0	6.5
Valley National Bank of Long Island	8	95.1	107.3	3.9
Hempstead Bank	16	85.4	95.3	3.5
Long Island National Bank	8	82.0	89.2	3.4
Peninsula National Bank	5	53.0	58.8	2.2
Nassau Trust Company	3	27.0	30.0	1.1
Bank of Westbury Trust Company	3	25.3	27.7	1.0
First National Bank of Glen Head	3	21.6	24.3	.9
Second National Bank & Trust Company, Hempstead	1	21.1	23.4	.9
Matinecock Bank	2	13.9	15.1	.6
Community Bank of Lynbrook	3	11.6	13.4	.5
Oceanside National Bank	2	10.8	11.6	.4
County National Bank of Mineola	2	9.6	11.1	.4
Totals	159*	2,438.5	2,792.7	100.0§

* Includes approved, unopened branches as of 1-1-64 and limited service branches.

† This is **not** a size distribution of Nassau County commercial banking, for two reasons: (1) seven of the fifteen Nassau-based banks have branches outside Nassau County and thus the total deposits of these banks cannot be attributed to the County; (2) five New York City banks and one Suffolk County bank have branches in the County (see Table 4). It is a size distribution of the total deposits of Nassau County-based commercial banks.

‡ Though Meadow Brook's main office is now in Jamaica, Queens, it is treated throughout this study as a Nassau bank.

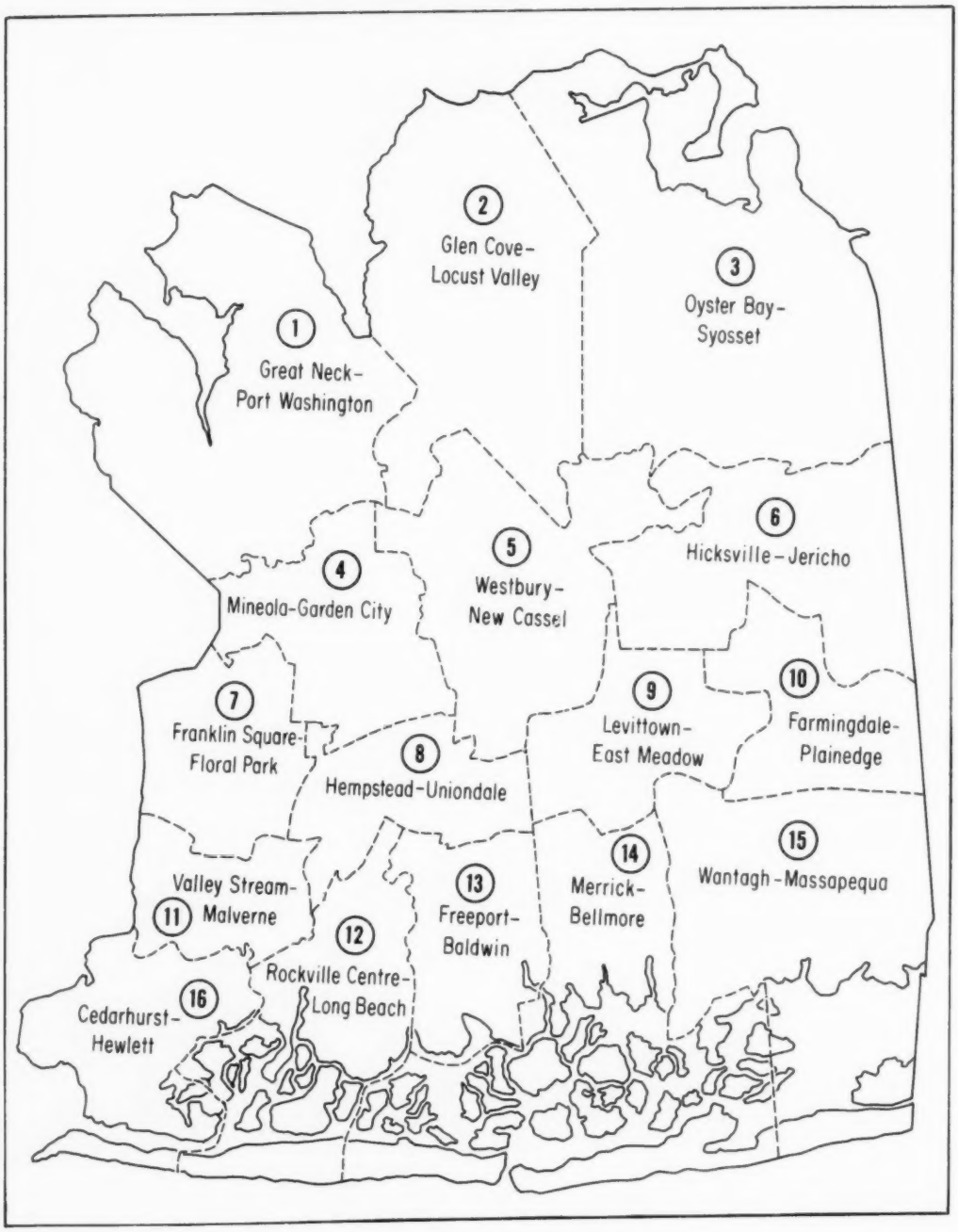
§ Sums to 100.1 due to rounding.

Source: Annual Reports of the banks and Table 4 for office data.

(or even international) in scope, while the market for individual checking account services tends to be quite narrow geographically, perhaps no larger than a few city blocks in some instances.

Thus for certain banking products or services, the whole of the New York City Standard Metropolitan Statistical Area (of which Nassau County is a part) may represent the relevant geographic area, while for other products or services a few blocks in Mineola or West Hempstead may delineate the relevant area. However, if it is one's purpose to describe and analyze structural change, it is useful to note that for a sizable share of its total banking output, a particular banking office faces most of its competition from those other offices which are "accessible" to a "significant portion" of its

Nassau County Banking Submarkets



actual or potential customers. This would seem especially true in an area in which banking operations are primarily retail in nature, as in Nassau.

As a result, two arbitrary decisions must be made in any attempt to isolate those banking offices that are in most direct competition with one another: (1) how "accessible," in terms of customer convenience, must a banking office be to represent meaningful competition for other offices; (2) what portion of potential customers of one office must have "access" to a second office before one concludes that meaningful competition exists between them. It should be obvious that there is no one "right" answer to these questions; in other words, some degree of arbitrary judgment enters into the process of dividing any given area, such as Nassau County, into smaller areas within which the banking offices are deemed to be in substantial competition with one another.

Further, *any* such subdivision leads inevitably to some unrealistic situations at the boundaries of the subdivisions. Certain banking offices near a boundary of Subdivision A are in more direct competition with certain banking offices across the line in Subdivision B than with certain other offices on the far side of Subdivision A. One fair test of the validity of the boundaries drawn is the extent to which these situations are held to a minimum.

Having noted some major problems in trying to isolate areas within which banking offices are in most direct competition, it still appears useful and even necessary to do this to achieve a meaningful description and analysis of changes in banking structure in Nassau County. Whatever the objections to the procedure and to the particular division made, we believe that the analytical deficiency which would result from not performing the division would be more serious.

We have divided Nassau County into 16 banking "submarkets."[21] The division was aimed at putting together those banking offices which most directly compete with one another, and the residential, commercial and industrial areas with most direct access to those offices. Factors which were weighed in determining the boundary lines included the following: (1) road distances; (2) traffic patterns; (3) commuting paterns; (4) location of residential, commercial and industrial centers; and (5) location of banking offices vis-a-vis one another (to avoid where possible the problem previously noted).[22]

2. *Structural change in Nassau submarkets, 1958-1960*

The summary picture of changes during the period 1958-1960 in the Nassau banking structure by submarkets is pre-

[21] See map, page 484. The term, "submarkets," was chosen in recognition of the fact that for certain banking services and products, the relevant geographic area is larger than our subdivisions. Further, since several banks have offices in most of the submarkets (and also in New York City and Suffolk County), in an important sense these banks compete throughout a broader "market."

[22] The first division was made entirely on this basis, without reference to Census Tract boundaries. Then, in order to develop Census data by submarkets, we modified the submarket boundaries to coincide with Census Tract boundaries. Fortunately, this did not involve a substantial modification of the submarket boundaries, since the Census Tracts, on the average, are only one-fourteenth as large as the submarkets. In no case did the modification force the shift of a banking office from the submarket in which we had originally placed it. In a few instances, the modification did force a departure from the ideal distribution of certain small residential areas among submarkets, but no serious distortion resulted. Only two Census Tracts, of the 220, had to be split between submarkets. A list of Census Tracts by Submarkets is available on request.

The correlation results below are one indication that the submarkets arrived at do not represent too fine a subdivision, relative to the economic base-banking structure relationship.

Table 7

Banking Structure of Nassau County by Submarkets, 1958, 1961 and 1964

Submarket Number	Number of Commercial Banks Represented			Number of Commercial Banking Offices			Number of Offices of Commercial Banks, Savings & Loan Associations and Mutual Savings Banks		
	1-1-58	1-1-61	1-1-64	1-1-58	1-1-61	1-1-64*	1-1-58	1-1-61	1-1-64*
1	6	5	9	11	14	21	16	19	28
2	5	5	5	6	7	9	7	8	10
3	3	3	6	6	6	10	7	7	12
4	4	4	7	10	15	21	14	19	26
5	4	4	5	7	9	11	8	10	12
6	2	3	6	5	9	15	5	11	19
7	5	5	6	8	11	14	9	14	18
8	4	4	8	5	6	13	6	7	15
9	3	4	5	4	7	10	4	9	13
10	4	7	8	5	9	10	6	10	11
11	3	3	3	6	7	8	8	11	12
12	5	5	7	9	9	13	12	13	17
13	3	4	6	6	10	12	9	13	17
14	3	4	6	4	6	10	4	7	13
15	3	4	7	7	9	15	9	12	20
16	3	4	5	6	8	10	8	10	12
Total	—	—	—	105	142	202	132	180	255
Average per submarket	3.8	4.3	6.2	6.6	8.9	12.6	8.3	11.3	15.9

* Includes offices approved but unopened as of January 1, 1964.

Source: Compiled from various reports of the Federal and state banking authorities and bank annual reports.

sented in Table 7. In contrast to the decline by one in the number of banks operating in the County, the average number of banks represented in each submarket increased from 3.8 to 4.3. The average number of commercial banking offices per submarket increased from 6.6 to 8.9, while the average number of offices of commercial banks, savings and loan associations and mutual savings banks increased from 8.3 to 11.3. Well before the entry of New York City banks, an expansion of banking facilities and a penetration by Nassau-based banks into submarkets where they were previously unrepresented was proceeding apace.

A comparison of Tables 8 and 9 yields the picture of the changes in submarket structure by commercial banks during 1958-1960. Perhaps the most significant aspect of the comparison is the extent of penetration by individual banks into submarkets where they were previously unrepresented. Meadow Brook had offices

Table 8

Commercial Banking Offices* in Nassau County Submarkets† by Bank‡, January 1, 1958

Sub-Market Numbers	Nassau-based National Banks in Existence 1-1-58 and 1-1-64								Nassau-based State Banks in Existence 1-1-58 and 1-1-64					Nassau Banks Absorbed between 1-1-58 and 1-1-64						Number of Commercial Banking Offices
	Franklin	First National Bank of Glen Head	Second National Bank & Trust, Hempstead	Long Island National Bank	Meadow Brook	Oceanside	Peninsula	Valley	Hempstead Bank	Long Island Trust	Matinecock	Nassau Trust	Bank of Westbury Trust	Central Bank and Trust	Lynbrook National Bank	State Bank of Long Beach	Bank of Rockville Centre	First National Bank of Farmingdale	Fork Neck National Bank	
1	2	1	0	0	4	0	0	0	1	1	0	0	0	2	0	0	0	0	0	11
2	2	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	6
3	0	0	0	0	2	0	0	0	3	0	1	0	0	0	0	0	0	0	0	6
4	4	0	0	0	3	0	0	0	0	2	0	0	0	1	0	0	0	0	0	10
5	3	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	7
6	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
7	4	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	8
8	1	0	1	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
9	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
10	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	5
11	0	0	0	0	2	0	0	3	0	0	0	0	0	0	1	0	0	0	0	6
12	2	0	0	0	3	1	0	0	0	0	0	0	0	0	0	1	2	0	0	9
13	1	0	0	0	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6
14	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	7
16	1	0	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6
Totals	25	2	1	4	29	1	3	4	9	5	2	1	2	4	1	1	3	1	7	105

* Includes all commercial banking offices operating as of 1-1-58. In general, limited service facilities with branch certificates have been included.

† See map, page 484 for areas included in the various submarkets.

‡ See Table 2 for banks chartered and mergers consummated, 1-1-58 to 1-1-64.

Source: Compiled from various reports of Federal and state regulatory authorities and from bank annual reports.

in 14 of the 16 submarkets at the beginning of 1958; by the end of 1960 it had become the only bank operating in all 16 submarkets. Franklin was represented in 13 of the 16 submarkets on January 1, 1958, and increased this to 14 as of the end of 1960. Four other banks increased the number of submarkets in which they were represented during the period 1958-1960.

As Table 7 shows, the number of banks represented declined in only one submarket during 1958-1960, remained constant in eight submarkets, and increased in seven submarkets. The number of commercial banking offices increased in 14 submarkets and remained constant in two. The number of offices of commercial banks, savings and loan associations and mutual savings banks combined in-

Table 9

Commercial Banking Offices* in Nassau County Submarkets† by Bank‡, January 1, 1961

Sub-Market Numbers	Nassau National Banks in Existence 1-1-61 and 1-1-64								Nassau State Banks in Existence 1-1-61 and 1-1-64						Nassau Banks Absorbed between 1-1-61 and 1-1-64			Suffolk Bank	Number of Commercial Banking Offices
	Franklin	First National Bank of Glen Head	Second National Bank & Trust, Hempstead	Long Island National Bank	Meadow Brook	Oceanside	Peninsula	Valley	Community Bank, Lynbrook	Hempstead Bank	Long Island Trust	Matinecock	Nassau Trust	Bank of Westbury Trust	State Bank of Long Beach	Bank of Rockville Centre	First National Bank of Farmingdale	Security National	
1	4	1	0	0	7	0	0	0	0	1	1	0	0	0	0	0	0	0	14
2	2	2	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	7
3	0	0	0	0	2	0	0	0	0	3	0	1	0	0	0	0	0	0	6
4	3	0	0	0	5	0	0	0	0	2	5	0	0	0	0	0	0	0	15
5	4	0	0	0	1	0	0	0	0	1	0	0	0	3	0	0	0	0	9
6	1	0	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	9
7	5	0	0	0	2	0	0	2	0	0	1	0	0	0	0	1	0	0	11
8	1	0	1	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	6
9	2	0	0	0	2	0	0	0	0	2	1	0	0	0	0	0	0	0	7
10	3	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1	9
11	0	0	0	0	3	0	0	3	1	0	0	0	0	0	0	0	0	0	7
12	2	0	0	0	3	1	0	0	0	0	0	0	0	0	1	2	0	0	9
13	2	0	0	0	5	0	0	0	0	1	2	0	0	0	0	0	0	0	10
14	1	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	1	6
15	1	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	5	9
16	1	0	0	0	2	0	4	1	0	0	0	0	0	0	0	0	0	0	8
Totals	32	3	1	7	44	1	4	6	1	14	11	2	1	3	1	3	1	7	142

* Includes all commercial banking offices operating as of 1-1-61. In general, limited service facilities with branch certificates have been included.

† See map, page 484 for areas included in various submarkets.

‡ See Table 2 for banks chartered and mergers consummated, 1-1-58 to 1-1-64.

Source: Compiled from various reports of Federal and state regulatory authorities and from bank annual reports.

creased in 15 submarkets and remained constant in one during 1958-1960.

3. *Structural change in Nassau submarkets, 1961-1963*

The average number of banks represented in each submarket increased from 4.3 to 6.2 during 1961-1963, an increase of almost two banks. (See Table 7.) The average number of commercial banking offices per submarket increased from 8.9 to 12.6, while the average number of offices of commercial banks, savings and loan associations and mutual savings banks combined increased from 11.3 to 15.9. Thus the 1961-1963 expansion exceeded that of 1958-1960.

A comparison of Tables 9 and 10 shows the changes in submarket structure by commercial banks during 1961-1963. The most striking single change is the entry of First National City into 13 of the 16

Table 10

Commercial Banking Offices* in Nassau County Submarkets† by Bank‡, January 1, 1964

Sub-Market Number	Nassau-based National Banks									Nassau-based State Banks						New York City Banks					Suffolk Bank	Number of Commercial Banking Offices
	County National	Franklin	First National Bank of Glen Head	Second National Bank & Trust, Hempstead	Long Island National Bank	Meadow Brook	Oceanside	Peninsula	Valley	Community Bank, Lynbrook	Hempstead Bank	Long Island Trust	Matinecock	Nassau Trust	Bank of Westbury Trust	Bankers Trust	Chase Manhattan	Chemical	Commercial Bank of North America	First National City	Security National	
1	0	5	1	0	0	8	0	0	0	0	1	1	0	0	0	0	1	1	0	2	1	21
2	0	2	2	0	0	1	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	9
3	0	0	0	0	0	3	0	0	0	0	3	1	1	0	0	0	1	0	0	1	0	10
4	2	5	0	0	0	5	0	0	0	0	2	5	0	0	0	1	0	0	0	1	0	21
5	0	4	0	0	0	1	0	0	0	0	1	0	0	0	3	0	0	0	0	2	0	11
6	0	2	0	0	7	3	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	15
7	0	6	0	0	0	2	0	0	3	0	0	1	0	0	0	0	0	1	0	1	0	14
8	0	2	0	1	0	3	0	0	1	1	2	2	0	0	0	0	0	1	0	0	0	13
9	0	3	0	0	0	2	0	0	0	0	2	1	0	0	0	0	0	0	0	2	0	10
10	0	3	0	0	1	1	0	0	0	0	1	1	0	0	0	1	0	0	0	1	1	10
11	0	0	0	0	0	3	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	8
12	0	2	0	0	0	3	2	0	0	0	0	0	0	0	0	1	0	3	1	1	0	13
13	0	2	0	0	0	5	0	0	0	0	1	2	0	0	0	0	1	0	0	1	0	12
14	0	2	0	0	0	4	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1	10
15	0	2	0	0	0	2	0	0	0	0	1	0	0	0	0	0	1	1	0	2	6	15
16	0	1	0	0	0	2	0	5	1	0	0	0	0	0	0	0	0	0	0	1	0	10
Totals	2	41	3	1	8	48	2	5	8	3	16	14	2	3	3	3	6	7	1	17	9	202§

* Includes all commercial banking offices operating as of 1-1-64 **and** eleven branches approved but unopened on that date. The latter are noted in a footnote below. In general, limited service facilities which have branch certificates have been included. The inclusion of "approved, unopened" and limited service branches accounts for the somewhat larger number of branches listed for certain banks than the banks themselves list in their annual reports.

† See map, page 484 for areas included in various submarkets.

‡ See Table 2 for banks chartered and mergers consummated, 1-1-58 to 1-1-64.

§ Includes eleven branches which were "approved, unopened" as of 1-1-64. They are as follows: First National City Bank, 6 (including one which opened 1-6-64); Nassau Trust Co., 1 (opened 3-14-64); Long Island Trust Co., 1; County National Bank, 1; Bankers Trust Co., 1; Chemical Bank, 1 (opened 3-14-64). Valley National Bank has secured approval for a new facility, but it will replace an existing facility.

Sources: Compiled from various reports of Federal and state regulatory authorities and from bank annual reports.

submarkets.[23] Since all 17 of First National City's operating or approved branches are of the *de novo* variety, this bank alone accounts for close to half of the 1961-1963 increase in average number of banks represented per submarket.

The entry of Chase Manhattan into six submarkets, again all via *de novo* branches, ranks next in importance among the structural changes. Chemical Bank gained representation in five submarkets, having acquired branches in two through its 1963 acquisition of Bank of Rockville Centre. Bankers Trust has offices, open or approved, in three submarkets, including a branch which was formerly the sole

[23] This is based on inclusion of six offices approved but unopened as of January 1, 1964.

office of First National Bank of Farmingdale. Commercial Bank of North America operates a single office which it acquired through merger. Only two submarkets had no representation by New York City banks.[24] Ten of the 16 had offices of at least two New York City banks.

Two Nassau-based banks increased the number of submarkets in which they were represented during 1961-1963. Meadow Brook could not, of course, go beyond the 100 percent penetration achieved by the end of 1960, though four offices were added during the later period. Franklin's figure remained at 14 of the 16 submarkets, though its coverage of these 14 was expanded by nine additional offices.

The number of commercial banks represented increased in 14 of the 16 submarkets and remained constant in the other two during 1961-1963.[25] (See Table 7.) In six of the submarkets, there was an increase of three or more in the number of banks represented. The number of commercial banking offices increased in every submarket, with the increase ranging from one to seven offices. The increase in number of offices of commercial banks, savings and loan associations and mutual savings banks combined ranged among the submarkets from one to nine.

If variety in the size and scope of operations of banks represented leads to a "balanced" banking structure, Nassau County had such a structure by the beginning of 1964. Five New York City banks were on the scene, operating or planning to operate from one to 17 offices each. One Suffolk County-based bank operated nine offices. The 15 Nassau-based banks ranged from a single unit bank to Franklin and Meadow Brook with operations in New York City and Suffolk County as well as Nassau (Franklin's New York City operations began in May 1964).

Seven of the 15 Nassau-based banks had non-Nassau operations. The extent of representation in Nassau's submarkets by the Nassau-based institutions is a good measure of the variety in their scope of operations. Starting with Meadow Brook's representation in all 16 submarkets and Franklin's in 14, the distribution is as follows: one bank represented in 11 submarkets, one in eight, one in four, four in two, and six in one.

As noted previously, an expansion of banking facilities directly affects the structure dimension of performance, regardless of the effects on other dimensions of performance which the expansion may generate. Thus the notable expansion of Nassau banking facilities during 1958-1963 resulted directly in important customer benefits.

D. The Determinants of Banking Structure

1. *Choice of data*

The rapid expansion of banking facilities, unleashed suddenly by the removal of an absolute barrier to entry by a group of banks with large resources, provided an opportunity to test the relationship between the economic base of the submarkets and the banking structure which emerged. All of the Nassau submarkets were opened for entry by the New York City banks,[26] and Nassau-based banks

[24] Most of the area in submarket No. 11, one of the two without New York City bank offices, is protected by Section 105 of the New York State Banking Law—the "home office protection" provision. This is also one of the two submarkets in which Franklin is unrepresented. See section below dealing with home office protection in Nassau County.

[25] This includes approved unopened offices as of January 1, 1964.

[26] A number of areas within submarkets were closed to entry because of "home office protection." See below. All proposed offices had to secure the usual approval of the regulatory authorities.

kept pace by expanding their operations in the various submarkets. Since the economic base and the resulting banking structure differed among submarkets, one may test to what extent the former is related to the latter.

Data on population, family income, commuting, and age distributions are available for Nassau County Census Tracts, as of the 1960 Census of Population.[27] We used the Census Tract figures to develop data by submarkets. We then examined the relationship between these data and the banking office and deposits data by submarkets.

Some of the limitations of the data, given our purpose, are apparent from the notes presented with the several tables. However, some attention should be given here to the limitation imposed by the fact that the Census data are about four years old.[28] The question is whether these data exhibit a relationship with the *current* banking structure by submarkets; there are no later data available which allow analysis by submarkets.[29]

Use of these data appears justified by several considerations. First, the occurrence of a time lag between changes in the determinants of the demand for banking output, such as population and income, and changes in banking structure is the usual case.[30] Second, to the extent that the time lag between the population-income data and the banking structure is longer than may be ideal, the former can still serve as reasonably good proxies for more current data, provided that drastic shifts in income or population among submarkets did not occur in the 1961-1963 period. The best estimate of Nassau County's population as of January 1, 1964, indicates a seven percent increase in the four-year period following the Census.[31] Though this increase was of course not perfectly uniform among the submarkets, there is evidence that broader subdivisions of the County experienced similar rates of population growth.[32] In our correlation analyses below, the relative levels, rather than the absolute levels, of submarket income and population are crucial. Finally, our analyses indicate that the Census data *are* related to the current banking structure of the submarkets.

We have already noted in Part II that some analysts have relied heavily on "population per banking office" as the prime measure of overbanking. We questioned the validity of giving such great weight to this measure, to the exclusion of other relevant variables, notably, in-

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[27] Bureau of the Census, *U.S. Censuses of Population*, Final Report PHC (1)-104, Part 2.

[28] Income figures refer to 1959. Population, commuting and age distribution data are as of April 1, 1960.

[29] We have taken cognizance of the annual population estimates for the County and communities therein made by the Long Island Lighting Company, but these estimates do not lend themselves to conversion to submarket figures. See Long Island Lighting Company, *Population Survey, 1964*, and our Table 12.

[30] The lag, if any, between changes in the economic base of an area and a bank's decision to apply for permission to establish a *de novo* branch depends upon the "acceptable" length of time for unprofitable operations of the branch. Then a considerable period must elapse between the bank's affirmative decision and the actual opening of the branch, if and when approved.

The role of the regulatory authorities in the economic base-banking structure relationship is discussed below.

[31] See Table 12.

[32] The whole of Nassau County is divided into three "towns": North Hempstead, Hempstead and Oyster Bay. According to the estimates of the Long Island Lighting Company, the increases in population from April 1, 1960, to January 1, 1964, for these three towns were 8.7, 6.4 and 7.5 percent, respectively. See Table 1. Computed from Long Island Lighting Company, *Population Survey, 1964*.

come of bank customers. Analysis of the Nassau submarket data provides an indication, though partial and preliminary, of the variables which have been most important in shaping the County's banking structure .[33]

An exploration of the relationship between population and income measures and banking structure can expose a consistent pattern only if the expansion of banking facilities in Nassau had an economic basis. Certainly, for any given application for a new facility presented to the regulatory authorities, the bank in question believed on the basis of some evidence that sufficient demand for banking output existed in the area concerned to justify and make profitable the facility.

The form of public entry control is a veto power over applications presented by individual banks. To the extent that the "needs" test applied by regulatory authorities leads to a veto of proposed branches which individual banks believe could become profitable, there occurs a departure from the economic base-banking structure relationship which would exist under free entry.[34]

[33] Exploration of the relationship between certain variables and submarket banking structure will not, in itself, yield a conclusion as to whether overbanking is present. A high correlation could exist between one or more variables and the banking structures of the various submarkets, and yet be consistent with either an underbanking or overbanking thesis. For example, a high correlation between number of banking offices and personal income by submarket would tell us nothing about the "right" level of personal income per banking office. However, such a correlation would be consistent with an hypothesis that personal income helps to explain banking structure.

[34] This assumes that banks would establish the same facilities under free entry as they apply for under regulated entry. In fact, the divergence between the banking structure under regulated and under free entry would be even greater, to the extent that a "conservative" public policy towards entry discourages banks from submitting applications.

We have had no experience relevant to the current economy with a free entry system of banking. The existing banking structure therefore reflects the tests applied by the regulatory authorities to entry applications. When we relate population or income to *existing* banking structure, we are relating these variables to a structure shaped by the standards applied by the regulatory authorities. The entry standards are, however, not unrelated to the economic base of an area. Thus, an analysis relating the economic base to existing banking structure exposes the relationship only as filtered through the entry standards of the regulatory authorities.

2. *The relationship between income and population measures and banking structure*

Table 11 presents certain data relating to the economic base of the various submarkets. Table 12 presents figures on population and family income per banking office by submarkets. As a point of departure, the Nassau figures may be compared with similar data for the U. S. as a whole.

The population per commercial banking office in Nassau was 6,889 as of January 1, 1964.[35] The figure for the U. S. as a whole was 7,300 as of about mid-1963.[36] However, family income per commercial banking office in Nassau was

[35] This figure is based on operating and approved unopened offices on that date. Table 12 also presents County-wide figures based on 1960 Census population and 1964 offices as a basis for comparison with the various submarkets, since 1964 estimates of population are not available for the latter.

[36] *Federal Reserve Bulletin*, September 1963, p. 1194.

Table 11

Selected Census Tract Data for Nassau County Banking Submarkets

Submarket Number	Area	Population*	Percent of Employed Residents Who Work In Nassau County†	Percent of Total Population in 45-70 Age Group	Median Family Income‡ ($)	Number of Offices of Comm'l Banks S.&L. Assocs. and Savings Banks 1-1-64§
1	Great Neck—Port Washington	94,659	53.9	29.6	12,475	28
2	Glen Cove—Locust Valley	51,548	72.1	23.6	8,881	10
3	Oyster Bay—Syosset	38,938	66.0	21.2	9,022	12
4	Mineola—Garden City	93,571	51.2	27.0	9,464	26
5	Westbury—New Cassel	56,899	61.8	17.4	8,820	12
6	Hicksville—Jericho	98,895	57.3	12.8	8,506	19
7	Franklin Square—Floral Park	111,806	42.6	25.5	8,172	18
8	Hempstead—Uniondale	83,530	65.0	25.0	7,774	15
9	Levittown—East Meadow	96,936	58.6	12.6	7,625	13
10	Farmingdale—Plainedge	73,439	56.8	12.7	7,801	11
11	Valley Stream—Malverne	83,742	43.6	27.6	8,553	12
12	Rockville Centre—Long Beach	102,865	54.5	27.4	8,451	17
13	Freeport—Baldwin	81,191	62.6	26.1	8,095	17
14	Merrick—Bellmore	60,394	55.4	21.3	8,556	13
15	Wantagh—Massapequa	121,302	48.8	15.5	8,381	20
16	Cedarhurst—Hewlett	50,456	51.7	28.6	10,117	12
	County	1,300,171	55.1	22.0	8,515	255

*As of April 1, 1960.

†Percent of all residents whose place of work was reported who worked in Nassau County as of April 1, 1960. Tract figures were based on 25 percent sample.

‡Income in 1959. Tract figures were based on 25 percent sample.

§Includes approved unopened offices as of January 1, 1964.

Source: Computed from Bureau of the Census, Final Report PHC(1)-104, Part 2, **Census Tracts, New York, N. Y., Standard Metropolitan Statistical Area, Part 2, Outside New York City.**

$14.1 million while the nationwide figure on a comparable basis was $10.3 million.[37]

[37] The second footnote of Table 12 describes the basis for arriving at "family income" for the Nassau submarkets. The income data are as of 1959. Use of the median understates actual total family income. Further, the income of individuals not connected with a family is omitted. Applying the same procedure to the 1959 nationwide size distribution of "family personal income," one arrives at a similarly understated total family income figure of $276 billion. Division of this figure by the 26,789 commercial banking offices operating in the U. S. at the end of 1963 yields the stated family income per commercial banking office.

In the U. S., the extent of the understatement of "aggregate family personal income" by use of the median and by exclusion of individuals not associated with families was about 25 percent.

Table 12

Population* and Family Income† Per Banking Office‡, By Nassau County Submarkets

Submarket Number	Population Per Commercial Banking Office	Population Per Office of Commercial Banks, S. & L. Associations and Mutual Savings Banks	Index of Family Income Per Commercial Banking Office	Index of Family Income Per Office of Commercial Banks S. & L. Associations and Mutual Savings Banks
1	4,508	3,381	103.2	97.7
2	5,728	5,155	91.2	103.6
3	3,894	3,245	61.8	65.1
4	4,456	3,599	76.7	78.1
5	5,173	4,742	77.2	89.4
6	6,593	5,205	93.3	93.0
7	7,986	6,211	118.9	116.7
8	6,425	5,569	90.1	98.6
9	9,694	7,457	123.3	119.8
10	7,344	6,676	95.9	110.1
11	10,468	6,979	169.0	142.2
12	7,913	6,051	122.5	118.3
13	6,766	4,776	100.2	89.3
14	6,039	4,646	91.0	88.4
15	8,087	6,065	114.8	108.7
16	5,046	4,205	92.9	97.8
County (1960 Population Census)	6,436	5,099	100.0	100.0
County (1-1-64 population estimate)§	6,889	5,457	—	—

*Census population as of April 1, 1960.

†Family income was computed for each submarket by multiplying median family income in 1959 by number of families. The median was used by necessity rather than by choice; the mean is unavailable because of open-end classes. Use of the median understates the actual family income. The latter understates total income of residents in that unrelated individuals are not included. Further, 1963-64 income is significantly higher than 1959 income. To emphasize that the **relative** income levels among submarkets are the relevant consideration, the family income per office figures have been converted to an index, with the county average equal to 100.

‡Operating offices plus approved, unopened offices as of January 1, 1964. See Table 7 for detail.

§Estimate of Nassau County population as of 1-1-64 taken from Long Island Lighting Company, **Population Survey, 1964.**

Source: Computed from Bureau of the Census, **Censuses of Population and Housing: 1960, Census Tracts,** Final Report PHC(1)-104, Part 2, and from banking office data in Table 7.

Thus the population per commercial banking office in Nassau County is about six percent less [38] than the national average, while the income per banking office figure is about 37 percent above the national average.

The results of a number of simple correlations between measures of population

The understatement in Nassau stemming from use of the median may have been somewhat greater, due to the above-average number of high income residents. See U. S. Department of Commerce, *Survey of Current Business,* April 1963, p. 16, for the size distribution of U. S. family personal income, and *Federal Reserve Bulletin,* April 1964, pp. 518-519, for commercial banking offices at the end of 1963.

[38] This overstates the difference, since eleven approved but unopened Nassau offices as of January 1, 1964, were included in the computation.

and income and measures of banking structure are summarized in Table 13. Some of these are not individually of great import, but may be of some use in helping to piece together a pattern of relationships.

First, a number of high and significant correlations were found between measures of income and population and measures of banking structure. This result is hardly surprising; in fact, to have found otherwise would have occasioned surprise. However, such a set of relationships has a direct bearing on our study in several ways.

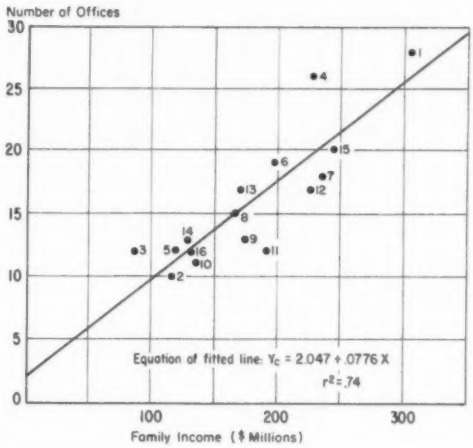
When the banking structure variables used in the correlations are as of the beginning of 1964, we have an indication that the 1961-63 expansion of banking facilities occurred in a consistent pattern throughout the County, i.e., had a consistent relationship with the economic bases of the various submarkets. The correlations themselves do not tell us whether the pattern of expansion was consistently rational or consistently irrational,[39] but the weight of economic evidence and economic logic would indicate the former. Since the proposals for new facilities were filtered through the entry standards of the regulatory authorities, we have an indication that the application of these standards need not conflict with the emergence of a consistent relationship between the economic base of an area and its banking structure.

The findings also give some indication that our submarkets, which were crucial to our analysis of structural change, were not too finely divided. It may be obvious that were the subdivision of an area carried too far—say, a few city blocks at the extreme—the subdivisions themselves would not yield a systematic pattern between their economic bases and their banking structure.

[39] See *supra*, n. 33, p. 492.

CHART

Family Income and Number of Offices of Commercial Banks, Savings and Loan Associations and Mutual Savings Banks Combined, by Nassau County Submarkets.



Source: Same as Table 12.

Second, independent variables involving a measure of income showed a consistently stronger relationship with measures of banking structure (offices and deposits) than did those involving population alone. (The chart above is a scatter diagram of the family income—combined office relationship.) Further, in one test (correlation #4) a significant negative correlation was found between the actual median family income and the number of families per combined office. With the number of families serving as a proxy for population, the effect of this test is to measure the income-banking office relationship with the influence of variations in population removed.[40] These

[40] The first order coefficients of partial correlation between family income and combined banking offices with population held constant, and between population and offices with family income held constant, were consistent with the view that submarket income is strongly related

Table 13

Summary of Correlation Results

Number	Independent Variable	Dependent Variable	Coefficient of Correlation* (r)
	A. Income†—banking offices‡		
1	Total Family income	Combined offices 1-1-64	.86
2	Total Family income	Combined offices 1-1-61	.82
3	Total Family income	Commercial banking offices 1-1-64	.78
4	Median Family income	Families per combined office	−.64
	B. Population—banking offices‡		
5	Population	Combined offices 1-1-64	.64
6	Population	Combined offices 1-1-61	.56
7	Population	Commercial banking offices 1-1-64	.55
	C. Income†—deposits§		
8	Family income	Commercial bank deposits, 15 submarkets, 12-31-63	.63
	D. Population—deposits§		
9	Population	Commercial bank deposits, 15 submarkets, 12-31-63	.40
10	Number in 45-70 age group	Commercial bank deposits, 15 submarkets, 12-31-63	.70

*All coefficients of correlation presented are significant at the .05 level except (9).
†See Table 12 for description of family income.

‡"Combined offices" refers to the number of offices of commercial banks, savings and loan associations and mutual savings banks combined operating or approved on the given date. "Commercial banking offices" also includes approved, unopened offices on the given date.

§The deposit figure for one submarket could not be used, since it highly overstated the deposits indigenous to that submarket.

Source: Computed from data described or presented in Tables 7, 11 and 12.

results are evidence that the "population per banking office" statistic can hardly be adequate as the sole test of overbanking (or underbanking).

Third, the results are consistent with the view that a lag exists between changes in the economic base of an area and changes in banking structure (see correlations 1, 2, 5 and 6), though hardly conclusive on this score. We were unable to test for the probable length of the lag, and thus rely on the evidence only to justify the forced use of a four-year lag.

Finally, some evidence that banks and the regulatory authorities consider the location of offices of savings and loan associations and mutual savings banks in evaluating alternative sites for commercial banking offices was found. A stronger relationship existed between population and income variables and the number of combined offices of the three types of financial institutions than between these same variables and the num-

to banking structure. However, the partial correlation technique is not too useful in this analysis because any total income figure has some population measure built into it, even though population as a separate variable is being held constant.

Table 14

Nassau County Communities of Over 6,000 Population With Home Office Protection As of January 1, 1964

Community	Population*	Banks Headquartered in Community†	Submarkets in Which All or Most of Community is Located
Hicksville	50,405	Long Island National Bank	6
Valley Stream	38,629	Valley National Bank	11
Hempstead	34,641	Hempstead Bank Second National Bank and Trust Company	8
Oceanside	30,488	Oceanside National Bank	12
Garden City	23,946	Long Island Trust Co.	4
Glen Cove	23,817	Nassau Trust Company	2
Mineola	20,519	Franklin National Bank County National Bank	4
Lynbrook	19,881	Community Bank	11
Westbury	14,757	Bank of Westbury Trust Company	5
Cedarhurst	6,954	Peninsula National Bank	16
Total	264,037	—	—

*As of April 1, 1960.

†Three other commercial banks are treated as Nassau-based banks in this study. Meadow Brook National Bank has its official head office in Jamaica, Queens. First National Bank of Glen Head and Matinecock Bank are headquartered in Glen Head and Locust Valley, respectively, both communities with less than 6,000 population in 1960.

Source: Office of the Comptroller of the Currency and Bureau of the Census, **Census of Population**, 1960, Volume 1, **Characteristics of the Population**, Part 34, **New York**, pp. 34-17.

ber of commercial banking offices alone.[41]

3. *Home office protection and banking structure*

Under Section 105 of the New York State Banking Law, a bank may not establish a branch in any city or village (other than New York City) "in which is already located the principal office of another bank, trust company or national banking office." As a result, twelve communities in Nassau County are closed to *de novo* branches of "outside" banks. Ten of these have populations of over 6,000. (See Table 14.) About 20.3 percent of the County's total population is found in these ten communities. Home office protection was eliminated in three additional communities, with a total population of about 59,000, when banks located therein were acquired by New York City banks during 1962-1963.

While it seems clear that home office protection is an anti-competitive device which is likely to have effects detrimental to bank customers, it would be invalid to maintain that 20 percent of Nassau's resi-

[41] A recent study indicated that the liquid asset holdings of families whose head was 45 or over were significantly higher than those of families with younger heads. See "Survey of Financial Characteristics of Consumers," *Federal Reserve Bulletin*, March 1964, p. 293. A correlation was run between the number of people in the 45-70 age bracket and commercial banking deposits. The coefficient of correlation proved to be somewhat higher than that for either the family income-deposit or population-deposit relationships.

dents suffer from a lack of competitive banking. Community boundaries do not represent barriers to bank customers; one can drive through community after community in the County without being aware of where one ends and the next begins. "Outside" banks have been successful in establishing branches close enough to protected areas to siphon off a considerable share of the business from these areas. The fact that none of our submarkets conforms to the boundaries of a community or communities protected by Section 105 is a recognition of the competitive overlap which exists among Nassau communities as far as the market for banking output is concerned.

Insofar as home office protection is effective, one would expect to find fewer banks represented than would otherwise be the case. Of the sixteen submarkets, submarket #11 contains a higher percentage of territory protected by Section 105 than any other. Only three banks are represented in this submarket, while each of the other 15 has at least five banks represented. (See Table 7.) From Table 12 we see that submarket #11, of the 16 submarkets, has the highest population per commercial banking office, second highest population per office of commercial banks, savings and loan associations and mutual savings banks combined, highest family income per commercial banking office, and highest family income per office of the financial institutions combined. This showing is consistent with the view that the existence of home office protection tends to distort the relationship which would otherwise exist between the economic base of an area and its banking structure.

V. *Operating Results of Nassau County Banks, 1958-1963*

Empirical results of a change in banking structure, such as that outlined in the preceding section, provide a guideline by which the wisdom of entry policies may be evaluated *ex post.*[42] Beyond this, empirical data of the sort presented in this section and the one following serve to strengthen the bases on which *ex ante* entry decisions are formulated in other markets under similar circumstances.

In this section we present pertinent information on Nassau County bank operations during the critical expansion period 1958-1963. In Section VI we discuss the performance of the Nassau banks over the same period from the standpoint of bank customers.

A. Rates of Return of Nassau-based Banks.

1. *Rates of return for Nassau-based banks in the aggregate*

The ratio of after-tax net income[43] to total capital for Nassau-based banks in the aggregate[44] was lower than the same ratio for all U. S. insured commercial banks in the aggregate[45] in 1958 and 1959, but was significantly higher than the all-bank ratio in the period 1960-1963. The Nassau and all-bank ratios were, respectively, 13.32 and 9.69 percent in 1960, 11.04 and 9.02 percent in 1961, 13.17 and

[42] The Comptroller of the Currency maintains a "post-audit" of every chartered bank during the early years of its existence. In addition, of course, every national bank is subject to periodic review through examination and reporting procedures.

[43] "After-tax net income" represents the actual income available for dividends and additions to the capital accounts, as presented in the Reports of Income and Dividends filed by individual banks with the regulatory authorities. It should not be confused with the "net operating earnings" figure typically presented by banks in their annual reports.

[44] Any aggregate data for Nassau banks are strongly influenced by the figures for the two largest banks.

[45] Ratios for all U. S. insured commercial banks in the aggregate will be referred to hereinafter as "all-bank ratios."

8.47 percent in 1962, and 13.41 and 8.50 in 1963. (See Table 15.)

Thus a commonly used measure of the success of bank operations, and also the one most relevant to resource allocation, indicates a result which seems anomalous at first glance: Nassau banks in the aggregate have enjoyed a rate of return significantly higher than that for all U. S. banks *since* the opening of Nassau to New York City banks, but prior to that time fared worse than the average for all banks. The later aggregate results were more favorable *despite* increased competitive pressures. The continuing healthy economic growth of the County was an important factor in this showing.[46] Also, it is at least possible that realization of the threat of eventual entry by the City banks alerted the County-based banks to the need for even more efficient operations.

Other measures of the earnings performance of Nassau banks are also presented in Table 15. These reinforce the conclusion that Nassau banks in the aggregate have done well in recent years relative to all banks. In 1960, 1962, and 1963, the ratio of net income to total assets for Nassau banks exceeded the all-bank ratio, and was only slightly below the all-bank figure in 1961. Throughout the 1958-1962 period, the Nassau ratios of net current operating earnings to total assets exceeded the all-bank ratios, though in 1963 the Nassau figure dropped slightly below that for all banks.

A special rate of return which takes account of loan loss reserves (after tax net income plus net addition to loan loss reserves to total capital plus loan loss reserves) was computed for Nassau banks. The discretion which banks exercise in their net yearly addition to reserves sometimes leads to a distortion of year-to-year net income comparisons. As can be observed in Table 15, this rate of return has been more stable in the 1958-1963 period than the net income to total capital figure; though the former declined in 1963, it was still at 11.36 percent.

2. *Rates of return for individual Nassau banks*

A frequency distribution by years of the ratio of net income after taxes to total capital for 1958-1963 is presented in Table 16 for the thirteen Nassau banks which were in existence throughout the period.[47] Substantial differences in rates of return among banks are quite evident. Wide year-to-year fluctuations for given banks also occurred, though these are not revealed by the table.[48] In 1963, the rate of return for 12 of the 13 banks was above six percent and for eight of the 13 was above nine percent. The 1963 rate of return was higher than the 1962 figure for 12 of the 13 banks, and higher than the 1958 figure for seven of the 13. The median rate for the 13 banks was higher in 1963 than in 1958, 1959 and 1962, and was only slightly lower than the 1960 and 1961 figures.

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[46] One qualification is that the non-Nassau operations of the Nassau-based banks are included in the aggregate and individual bank figures.

[47] The table was put in this form to avoid possible disclosure of individual bank figures.

[48] Because of the influence of yearly variations in net additions to loan loss reserves and in certain non-recurring gains or losses, the year-to-year changes in this measure of rate of return sometimes do not accurately reflect changes in operating results of a bank. However, the rates of return have their own intrinsic importance as a measure of actual income, relative to the capital base, available for dividends and for retention in the bank. Yearly changes in the ratio of net income to total capital for a group of banks in the *aggregate*, such as those for the Nassau banks, are less subject to this weakness, due to an element of randomness in the non-recurring items.

Table 15

Comparison of Selected Ratios* for Nassau County Commercial Banks† and for All Insured Commercial Banks in the United States, 1958-1963

Year	Total Loans To Total Deposits (%)		Total Capital To Total Deposits (%)		Time Deposits To Total Deposits (%)		Interest Paid On Time and Savings Deposits To Total Current Operating Expenses (%)		Net Current Operating Earnings To Total Assets (%)		After-Tax Net Income To Total Assets (%)		After-Tax Net Income To Total Capital (%)		After Tax Net Income Plus Net Addition To Loan Loss Reserve To Total Capital Account Plus Loan Loss Reserves (%)
	Nassau	All Banks	Nassau	All Banks	Nassau	All Banks	Nassau	All Banks	Nassau	All Banks	Nassau	All Banks	Nassau	All Banks	Nassau
1958	57.57	45.60	6.99	8.44	48.94	30.51	34.96	24.69	1.35	1.21	.56	.71	8.79	9.34	13.91
1959	60.00	50.54	6.51	8.76	48.75	30.81	35.41	25.34	1.55	1.39	.36	.61	6.04	7.73	9.22
1960	63.01	51.29	6.76	9.01	48.51	32.00	36.54	25.80	1.61	1.48	.82	.78	13.32	9.69	14.31
1961	62.12	50.31	6.81	8.93	48.33	33.31	36.22	28.31	1.57	1.31	.69	.72	11.04	9.02	13.15
1962	60.68	53.54	6.83	9.07	52.81	37.56	44.66	33.14	1.27	1.23	.82	.68	13.17	8.47	13.47
1963	60.31	57.87	7.47	9.22	57.21	40.67	47.42	35.66	1.16	1.22	.90	.69	13.41	8.50	11.36

* For each year in the 1958-1963 period, the figures used for the given bank's balance sheet accounts were the average of the figures for the previous December, and June and December of the given year.

† All commercial banks with head offices in Nassau County, plus Meadow Brook National Bank, are included. The banks that were acquired by Nassau-based banks during the period are included in the years prior to their absorption, whether based in Nassau County or elsewhere.

Source: Ratios for all insured commercial banks are taken from, or computed from, the **Annual Reports** of the Federal Deposit Insurance Corporation for 1958-1962 and preliminary reports for 1963.
Ratios for the Nassau banks were computed from Reports of Condition and Reports of Income and Dividends for 1958-1963.

The after-tax rates of return on capital for Nassau banks may be compared with the average rate for all insured commercial banks in their respective size classes. Of the 13 Nassau-based banks in existence throughout the 1958-1963 period, four had higher rates than the all-bank rate for their size class in 1958, eight in 1960, and five in 1962.[49]

3. *Rates of return and "overbanking"*

We have defined "overbanking" as a situation in which the rates of return are so depressed by an "excess" of facilities that adequate banking performance from the standpoint of customers over the long run is threatened. We find no evidence that such is the case in Nassau County. The rate of return, net income after tax to total capital, for Nassau-based banks in the aggregate was higher in 1963 than for any of the five previous years. While the picture was mixed for the individual banks, the same rate of return was more favorable in 1963 than in 1962 for 12 of the 13 banks operating throughout the 1958-1963 period. The banks whose rates of return have been relatively unfavorable in recent years have been those which did not follow population movements with branch offices, or which adopted more cautious loan policies, or both.

B. Bank Operations as They Affected Rates of Returns

1. *Loan portfolios and loan rates*

Nassau-based banks in the aggregate maintained a higher loan-deposit ratio than the average for all insured commer-

[49] Published annual reports of the Nassau banks contain net operating earnings figures. We attempted to compute comparable rates of return for the individual banks based on their published data. However, the problems were such in gaining comparability for given banks over the 1958-1963 period and comparability among banks for a given year that we could not secure meaningful results. For example, the treatment of tax savings from transfers to loan loss reserves varies widely, with some banks giving no indication of the method used.

Table 16

Net Income After Taxes to Total Capital* For Thirteen Nassau County Banks†, 1958-1963

Rate of Return (Percent)	1958	1959	1960	1961	1962	1963
0– 5.99	2	2	2	0	5	1
6.00– 8.99	6	7	3	6	4	4
9.00–11.99	4	4	6	4	3	4
12.00–14.99	1	0	1	2	0	2
15.00–17.99	0	0	0	1	0	2
18. and above	0	0	1	0	1	0
Actual Median rate for 13 banks	7.19	8.63	9.77	10.16	7.47	9.39

* Capital base used for each year is the average of the capital for previous December, and June and December of given year.

† Includes all Nassau-based banks in continuous existence throughout 1958-1963 period.

Source: Computed from Reports of Condition and Reports of Income and Dividends, 1958-1963.

cial banks throughout the period 1958-1963. (See Table 15.) We would expect this on several grounds: the rapid rate of County growth relative to that of the United States; the high time-total deposit ratio, which generally allows a large loan portfolio relative to total deposits; and the aggressiveness typical of an influential segment of the Nassau banking community. The relatively high loan-deposit ratio undoubtedly influenced earnings favorably.

The composition of the loan portfolio was also favorable for earnings. While rates on specific loans declined in the period from 1959 (see Table 21), the ratio of loan income to total loans increased slightly (see Table 22). The latter reflected a relative shift to higher yielding installment and mortgage loans in the loan portfolios of Nassau-based banks.

Both the loan-deposit ratios and the loan income-total loans ratios for the Nassau banks are consistent with the fact that these banks received a higher proportion of their current operating earnings from loans and a lower proportion from investments than was true for all member banks in the Second Federal Reserve District in the aggregate. (See Table 17.)

2. *Time and savings deposits*

Both the Nassau banks and all U. S. insured commercial banks in the aggregate have experienced an increase in the ratio of time to total deposits in recent years. The Nassau ratio has been very significantly higher than the all-bank ratio throughout the 1958-1963 period, reflecting certain characteristics of the Nassau economy; high income, which generates large savings deposits; the commuting pattern, according to which a substantial volume of potential checking account business is conducted through City banks; and the County's substantial industrial and commercial growth which has generated time deposits from business firms.

The higher time to total deposit ratio for Nassau banks in the aggregate than for all banks is coupled with a higher effective rate of interest paid on these deposits. (See Table 22.) The same relationships hold for nearly all Nassau banks when compared individually with the all-bank ratio for their respective deposit classes. (See Table 18.) As a result, interest payments on time and savings deposits represent a significantly higher proportion of the Nassau banks'

Table 17

Comparison of Sources of Revenue for Nassau County Commercial Banks* and for All Member Banks in the Second Federal Reserve District, 1958-1963

Year	Total Current Operating Revenue For Nassau Banks (Thousands of Dollars)	Percent of Total Current Operating Revenue											
		Interest on U.S. Government Obligations		Interest and Dividends On Other Securities		Income on Loans		Service Charges On Deposit Accounts		Trust Department Earnings		All Other Current Operating Revenue	
		Nassau	Second District	Nassau	Second District	Nassau	Second District	Nassau	Second District	Nassau	Second District	Nassau	Second District
1958	70,498.1	13.4	19.4	5.7	8.1	66.3	60.5	10.5	7.4	.5	2.4	3.6	2.2
1959	80,284.0	14.2	19.8	5.6	8.2	66.2	60.5	9.9	7.2	.5	2.2	3.6	2.1
1960	87,710.7	13.1	19.0	5.8	8.0	67.7	61.8	9.6	7.0	.6	3.0	3.2	1.2
1961	101,095.3	11.9	18.8	6.0	7.9	69.0	62.7	9.2	7.0	1.0	3.2	2.9	.4
1962	113,644.2	12.5	18.9	7.8	7.8	67.7	62.8	8.3	6.8	.9	3.2	2.7	.5
1963	125,582.9	12.5	18.9	10.4	7.8	65.3	63.2	8.3	6.6	.7	3.4	2.9	.1

* All commercial banks with head offices in Nassau County, plus Meadow Brook National Bank, are included. The banks that were acquired by Nassau-based banks during the period are included in the years prior to their absorption, whether based in Nassau County or elsewhere.

Sources: The ratios for Nassau banks were computed from Reports of Income and Dividends, 1958-1963. The ratios for all member banks in the Second Federal Reserve District were taken from Federal Reserve Bank of New York, **Operating Ratios: Earnings and Expenses of Second District Member Banks** for the years 1959-1963.

operating expenses than was true for all banks.[50] (See Table 15.)

The relatively high, and increasing, time to total deposits ratio, coupled with the higher effective interest rate on time deposits, has subjected the Nassau banks to a considerable downward pressure on earnings.[51] Furthermore, differences in rates of return among Nassau banks can be traced in considerable degree to differences in effective interest rates and in deposit mix. The fact that the pressure on profits from rising interest expense coincided with increased competitive pressure stemming from facilities expansion makes the overall earnings record of the Nassau banks all the more remarkable.

3. *Other aspects of bank operations*

The capital-deposits ratio was lower for Nassau banks than for all U. S. insured banks from 1958 through 1963. (See Table 15.) This can be attributed at least in part to the rapid growth of deposits in the County. This relatively low capital-deposits ratio helps to explain the favorable earnings record of the Nassau banks.

A relatively efficient use of manpower by the Nassau banks is indicated by their ratio of salaries and wages to total current operating expense, which is signifi-

[50] When Nassau banks are compared with all member banks in the Second Federal Reserve District, the ratio of interest on time and savings deposits to total current operating revenue was slightly less for the Nassau banks from 1958 through 1961, but exceeded the member bank ratio in 1962 and 1963. See Table 19.

[51] The greatest pressure exists in the period immediately after an increase in the rate on these deposits. The higher rate applies immediately to all deposits, but the asset mix based on existing deposits can at best be shifted only gradually toward higher yielding assets. The increase in the time deposit interest rate may also spur banks to achieve an optimal portfolio distribution over time.

cantly lower than the same ratio for all member banks in the Second Federal Reserve District. (See Table 19.) Nassau banks also enjoyed a lower ratio of current operating expenses to current operating revenue throughout the 1958-1963 period.

Trust department earnings have been a less important source of revenue for the Nassau banks than for all member banks of the Second District in the aggregate. (See Table 17.) This reflects the concentration of trust business in New York City. The Nassau banks, because of their proximity to the City, have found it difficult to develop this aspect of banking.

VI. *The Performance of the Nassau Banking System from the Standpoint of Bank Customers*

Professor Bain has offered the following as the principal dimensions of market performance for industry in general:

1. The height of price relative to the average cost of production, and thus the size of profits.
2. The relative efficiency of production so far as this is influenced by the scale or size of plants and firms (relative to the most efficient), and by the extent, if any, of excess capacity.
3. The size of sales-promotion costs relative to the costs of production.
4. The character of the product, including choice of design, level of quality, and variety of product within any market.
5. The rate of progressiveness of the firm and industry in developing both products and techniques of production, relative to evidently attainable rates and relative to the costs of progress.[52]

[52] Bain, *op. cit.*, page 12.

Table 18

Comparison of Interest Rates Paid On Time and Savings Deposits and Deposit Mixes for Individual Nassau Banks and for All Insured Banks in Same Deposit Class, 1962

Bank*	Index of Interest Paid as Percent of Time and Savings Deposits for Individual Nassau Banks to Same Ratio for All Banks in Same Deposit Class† (100 Indicates Equality)	Index of Time and Savings to Total Deposits for Individual Nassau Banks to Same Ratio for All Banks in Same Deposit Class† (100 Indicates Equality)
A	131.7	119.9
B	116.1	136.3
C	109.1	117.7
D	121.1	145.2
E	127.5	96.2
F	112.9	170.6
G	127.9	144.3
H	112.5	122.5
I	97.7	136.1
J	107.3	94.1
K	111.3	134.0
L	114.8	129.1
M	116.4	138.3
N	121.9	108.1
O	120.1	137.0

*Letter designations for banks vary with each table.

†Deposit figures for individual banks represent average of figures for December, 1961 and June and December, 1962.

Source: Computed from Reports of Condition and Reports of Income and Dividends, 1962 and FDIC, **Annual Report, 1962.**

We will use these performance dimensions, modified as necessary for application to banking, as our outline in analyzing the performance of the Nassau banking system.

A. Profit Levels

In the previous section, the profits and rates of return of Nassau-based banks were examined to ascertain whether the entry of New York City banks posed any threat to the ability of the Nassau banking system to perform adequately from the customer standpoint; i.e., whether overbanking had resulted. Here, again, we need to examine rates of return, but with a different end in mind. Economists

Table 19

Comparison of Disposition of Revenue for Nassau County Commercial Banks* and for All Member Banks in the Second Federal Reserve District, 1958-1963

Year	Total Current Operating Expenses			Percent of Total Current Operating Revenue									
	Thousands of Dollars	Percent of Total Current Operating Revenue		Salaries and Wages Paid Officers and Employees		Interest On Time and Savings Deposits		Pension, Hospitalization and Other Benefits†		Net Occupancy Expense of Bank Premises†		All Other Current Operating Expenses	
		Nassau	Second District	Nassau	Second District	Nassau	Second District	Nassau	Second District	Nassau	Second District	Nassau	Second District
1958	49,452.0	70.1	75.8	24.1‡	28.7	24.5	25.4	—	—	—	—	21.5	21.7
1959	53,559.4	66.7	74.2	21.9	27.1	23.6	25.7	—	—	—	—	21.2	21.4
1960	57,586.8	65.6	74.0	20.9	26.1	24.0	26.9	—	—	—	—	20.7	21.0
1961	67,936.0	67.2	75.2	21.8	25.9	24.3	27.8	3.0	2.8	5.1	4.8	12.9	13.9
1962	83,482.1	73.5	78.4	19.9	24.7	32.8	32.6	3.2	2.9	5.2	4.5	12.4	13.7
1963	96,457.4	76.8	79.5	19.4	24.3	36.4	33.5	2.9	3.0	5.8	4.5	12.2	14.2

*All commercial banks with head offices in Nassau County, plus Meadow Brook National Bank, are included. The banks that were acquired by Nassau-based banks during the period are included in the years prior to their absorption, whether based in Nassau County or elsewhere.

†Not available from Report of Income and Dividends until 1961.

‡Includes directors' fees for state banks.

Sources: Ratios for Nassau banks were computed from Reports of Income and Dividends, 1958-1963. Ratios for all member banks in the Second Federal Reserve District were taken from Federal Reserve Bank of New York, **Operating Ratios: Earnings and Expenses of Second District Member Banks** for 1959-1963,

are in general agreement that a "very high" rate of return, relative to that for similar uses of capital elsewhere, for a particular industry [53] over a lengthy period, when not explicable by a continuing flow of technological innovations or other special circumstances, may be an indicator of poor performance from the consumer standpoint. A more efficient allocation of resources would call for the flow of additional resources into this industry, leading to larger output, lower prices and lower rates of return. Firms in an industry enjoying abnormally high rates of return are typically protected by high barriers to entry.

The rate of return [54] of Nassau-based commercial banks in the aggregate was lower than that for all U. S. insured commercial banks in the aggregate in 1958 and 1959. (See Table 15.) It climbed well above the all-bank figure in 1960—13.3 percent as against 9.7 percent—and remained higher in 1961, 1962 and 1963. When rates of return of the 13 Nassau-based banks in existence from January 1, 1958, to the present are individually compared with the rates of return of all U. S. insured commercial banks in their respective deposit classes for 1958-1962, we find that, of the 65 observations—13 banks and five years—the Nassau banks had higher figures 32 times and lower figures 33 times.

To oversimplify to some degree, the question in Part V was: are the rates of

[53] An "industry" may be defined here as consisting of a group of firms selling a similar product or products to a *common group of buyers.*

[54] Net income after taxes to total capital.

return to Nassau banks "too low"; i.e., is overbanking present? In this section the question is: are they "too high"; i.e., is the level of competition inadequate to protect consumers?[55] The analysis in Part V yielded a negative answer to the first question. The second question is a leading one, in that complex issues are involved and any answer should be carefully qualified.[56]

Considerations of economic welfare and efficient resource allocation have led economists to utilize the competitive model as a standard against which to test the performance of various industries, though they recognize that the conditions of "pure competition" are unattainable in most actual markets. It is clear that the rates of return to Nassau banks, and, by implication, to banking in general, are higher than would be present under pure competition. A number of imperfections in banking markets lead to this result. Some of these imperfections are inevitable, given the nature of the banking function, others are associated with the regulatory function, and still others result from individual bank actions which are consistent with the profit motive but not necessarily with optimum performance.

One would have to explore all these matters for banking in general to answer adequately the question raised, but this would clearly be beyond the scope of this paper. Therefore, for our purposes, the most relevant standard against which to measure the rates of return for Nassau banks is the rate secured by the banking industry in general. On this basis, the performance of the Nassau banking system in the "profit level" dimension is within the traditional range of performance in banking.

B. Economies of Scale in Nassau Banking

When all economies of scale are realized, output is being produced at minimum attainable long-run costs. Therefore, it is desirable from the standpoint of gaining an efficient allocation of resources that firms operate at a scale sufficient to yield these economies. The literature on economies of scale in banking is growing steadily, as economists wrestle with the number of conceptual problems which make it difficult to secure a clear picture.[57]

The view emerging from the studies is that unit costs fall significantly over the range up to $5 million in deposits, level off over the range to $50-100 million in deposits, and then decline somewhat more for still larger banks.[58] The smallest Nassau commercial bank had deposits of almost $10 million at the end of 1963. (See Table 3.) Seven of the Nassau-based banks had deposits above $50 million, as did all five New York City banks represented in the County. Thus we may conclude that the size distribution of the banks operating in Nassau County is consistent with substantial at-

[55] In banking, as in the unregulated industries, there is no direct public control over rates of return. However, the control over changes in banking structure exercised by the regulatory authorities inevitably affects the rates of return of individual banks and the banking system.

[56] It should be clear that the negative answer to the first question does not automatically provide an answer to the second. The range in "acceptable" rates of return, from the public standpoint, must be considerable.

[57] Notable among the problems are the multiproduct character of banking, the significantly different product mix of large and small banks, and the existence of both unit and branch banks.

[58] Paul M. Horvitz, "Economies of Scale in Banking," *Private Financial Institutions*, a series of research studies prepared for the Commission on Money and Credit, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1963, pp. 13-17.

tainment of the benefits of banking economies of scale.

C. Structure Dimension of Performance

1. *Number of alternative sources of supply*

The entry into an area of a previously unrepresented bank adds one alternative source of supply of banking services and products for the area's banking customers. In Part IV we showed that the number of independent sources of supply has steadily increased in the various Nassau submarkets since 1958, with the average number of banks represented per submarket moving from 3.8 at the beginning of 1958 to 4.3 as of January 1, 1961, and to 6.6 at the beginning of 1964. Other things being equal, this increase is an important consumer benefit.

2. *Breadth of product line available*

The possibility exists that the line of banking services and products readily available to some customers will be broadened when additional offices are opened in an area. This possibility becomes stronger when a new office represents the first entry of a particular bank into an area. With the average number of banks represented per submarket increasing from 3.8 to 6.6 in the 1958-1963 period, and with the average number of commercial banking offices per submarket increasing from 6.6 to 12.6, including offices of New York City banks, certain specialized banking services became readily available for the first time to a number of Nassau customers during this period.

3. *Convenience of locations and hours*

With the number of commercial banking offices in Nassau increasing from 105 on January 1, 1958, to 142 on January 1, 1961, and to 202 [59] on January 1, 1964, and the average number of offices per submarket increasing from 6.6 to 8.9 to 12.6 on the same dates, it is evident that most bank customers in Nassau have more convenient access to banking facilities now than was the case six years ago.

Table 20

Banking Hours of Nassau County National Banks, 1959 and 1963

Bank*	Full-Scale Banking Hours Per Week Per Office†		Full-Scale "Extra Hours" Per Week Per Office‡	
	1959	1963	1959	1963
A	35.8	38.2	3.9	5.0
B	32.0	32.0§	2.0	2.0
C	34.5	35.0	2.5	3.0
D	38.5	40.0	6.8	8.0
E	32.0	36.0§	2.0	2.0
F	32.5	32.3	2.1	2.1
G	37.0	35.8	7.0	7.0
H	32.0	30.8	2.0	2.3
I	32.8	33.3	4.2	3.1

*Letter designations for banks vary with each table.

†Full-scale hours were defined as those hours in which the full line of banking services was available. The figure for each bank was obtained by totaling all such hours for all branches per week and dividing by the total number of offices. An "office" was defined as any location with a branch certificate.

‡"Extra hours" were defined as all pre-9 a.m., post-5 p.m. and Saturday hours. The figure was obtained by totaling all such hours for all branches per week and dividing by the total number of offices. At least four of the National Banks also offered "limited service" extra hours by the end of 1963.

§1962.

Source: Office of the Comptroller of the Currency.

Very limited hours reduce the convenience of a banking facility for its customers. Table 20 presents data on banking hours in 1959 and 1963 for the Nassau-based national banks. Five offered longer hours in 1963 than in 1959, one had unchanged hours, and three had reduced their hours. For many jobholders, early, late and Saturday banking hours are especially beneficial. Five of the Nassau national banks offered more "extra hours" in 1963 than in 1959, while

[59] This includes 11 approved, unopened offices.

the "extra hours" of the remaining four were unchanged. Nassau banking services were thus available at more convenient locations and more convenient hours in 1963 than in 1959.

D. Prices of Banking Products and Services

1. *Loan rates*

We collected data on the 1959 and 1964 rates in Nassau for seven standardized loans. The data from eight replies from Nassau banks are presented in Table 21. The extent of change in rates may be summarized as follows: *conventional mortgage*, rates of two banks lower, rates of six banks unchanged; *new auto loan (non-dealer)*, six lower, two unchanged; *new auto loan placed through dealer*, three lower, three unchanged; *signature loan*, eight unchanged; *personal installment loan*, four lower, four unchanged; *business term loan*, one lower, four unchanged; *three-month commercial loan*, two lower, six unchanged.[60]

The rates for at least two banks declined for five of the seven types of loans; signature loans (no change) and business term loans (one decline) were the only exceptions. None of the eight banks indicated a higher rate in 1964 for any of the seven types of loans. The most widespread declines came in the installment loan area, including auto loans.

These data indicate rather conclusively that loan rates in Nassau County tended to be lower in 1964 than in 1959, with consequent benefit to bank customers. It is difficult, however, to determine precisely the causes for this decline. The money market was tighter in late 1959 than in early 1964, which would lead, other things being equal, to somewhat lower rates at the later date. The prime rate moved from four and one-half percent to five percent on September 1, 1959, and then declined to four and one-half percent again on August 23, 1960, where it has remained since. The rate on short-term business loans in 19 large cities, compiled by the Federal Reserve Board, was virtually the same in 1959 and March 1964 (5.0 and 4.99 respectively.)[61] Good national data on installment loan rates, against which the Nassau figures could be compared, are not available.

Discussions with Nassau bankers yield the definite impression that the degree of competition in the Nassau loan market (and submarkets), especially in the area of consumer loans, has increased in the past two years. The increased competition is, of course, related in part to the recent structural changes previously described. It is also due, however, to the increased pressure on all banks to secure higher yielding assets to keep pace with the increased volume of savings deposits and the increased rates on these deposits. This pressure would be felt even in the absence of major structural change.

The ratio of loan income to total loans for Nassau-based banks in the aggregate has moved upward slightly since 1958, and has been consistently higher than that for all U. S. insured commercial banks in the aggregate during the period. (See Table 22.) The increase in the Nassau loan income-total loan ratio largely reflects a shift in loan portfolios to higher-yielding consumer loans. This shift is an

[60] Figures for fewer than eight banks are given for certain loans, due to omissions in banks' replies or to absence of activity in these loans.

[61] *Federal Reserve Bulletin*, April 1964, p. 473.

Table 21

Rates for Standardized Loans for Eight Nassau County Banks, 1959 and 1964

Bank*	Conventional Mortgage, 15 Years, Based on Two-Thirds of Appraised Value, $20,000		Non-Recourse New Automobile Loan, 18 Months, Two-thirds of Price, With Life Insurance†		Non-Recourse New Automobile Loan, 18 Months, Placed Through Dealer†		Signature Accommodation Loan, 1 Year, $1,000		Unsecured Personal Installment Loan With Life Insurance, $1,000†		Term Loan to Worthy Business Borrower, 5 Years		Unsecured Commercial Loan to Worthy Business Borrower, 3 Months	
	1959	1964	1959	1964	1959	1964	1959	1964	1959	1964	1959	1964	1959	1964
A	5.75	5.50	5.00	4.75	5.50	5.50	6.00	6.00	5.00	4.75	5.00	5.00	4.50	4.50
B	6.00	5.50	5.00	4.75	5.00	4.75	6.00	6.00	6.00	4.75	5.50	5.50	5.50	5.00
C	5.75	5.75	5.00	4.75	—	—	6.00	6.00	5.50	4.75	5.50	5.50	4.50	4.50
D	5.50	5.50	5.75	4.75	4.25	4.25	6.00	6.00	6.50	4.75	5.25	4.75	4.50	4.50
E	5.50	5.50	5.00	5.00	5.50	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
F	5.50	5.50	5.50	5.00	6.00	5.75	6.00	6.00	6.00	6.00	—	—	5.50	5.00
G	5.50	5.50	5.00	4.75	—	—	6.00	6.00	6.00	6.00	—	—	5.25	5.25
H	5.50	5.50	4.50	4.50	4.50	4.50	6.00	6.00	6.50	6.50	—	—	5.50	5.50

*Letter designations for banks vary with each table.

†Discount rate.

Source: Data supplied to the Office of the Comptroller of the Currency.

element in the improved performance of the Nassau banking system, insofar as it reflects increased availability of funds for consumer borrowing and increased willingness of the bankers to look with favor on this type of business.

2. *Service charges on demand deposits*

The ratio of service charges on deposits to demand deposits has been significantly higher for Nassau-based banks in the aggregate than for all U. S. insured commercial banks in the aggregate throughout the period 1958-1963. (See Table 22.) This relationship sheds little light, however, on the question of how the Nassau service charges for individual checking accounts compare with the national average. The ratio for all United States banks is heavily weighted by large business accounts on which no service charges are levied. These large accounts are heavily concentrated in the major financial centers. As a result, the ratio of service charges to demand deposits for the banks in *any* area outside a financial center is likely to be higher than the same ratio for all United States banks.

A comparison of the service charge-demand deposits ratio of each Nassau bank with the aggregate ratio for all U. S. banks in its respective deposit class is somewhat more relevant to a determination of the comparative level of Nassau service charges.[62] In 1962, 14 of the 15

[62] Even this comparison must be partially qualified by the point previously made. It is likely, for example, that a billion dollar bank operating in Nassau will have a different size distribution of deposits than will a billion dollar bank operating in the Chicago Loop. However, as the size of bank declines, the service charge-demand deposit ratio will be less distorted by large business accounts with no service charges.

Table 22

Selected Performance Ratios for Nassau County Commercial Banks and for All Insured Commercial Banks in the United States, 1958-1963*

Year	Loan Income to Total Loans (%)		Interest Paid On Time and Savings Deposits to Total Time and Savings Deposits (%)		Service Charges On Deposits to Demand Deposits (%)	
	Nassau	All Banks	Nassau	All Banks	Nassau	All Banks
1958	5.69	5.23	2.48	2.10	1.01	.34
1959	5.63	5.38	2.47	2.34	.99	.36
1960	5.53	5.78	2.55	2.43	.96	.39
1961	5.85	5.61	2.65	2.54	.94	.43
1962	5.86	5.51	3.26	2.90	.93	.44
1963	6.01	5.46	3.54	3.10	1.08	.45

*Footnotes of Table 15 apply.

Source: Same as Table 15.

Nassau-based banks had a higher ratio of service charges to demand deposits than the aggregate ratio for all U. S. commercial banks in their respective deposit classes. This indicates the likelihood that service charges on individual accounts in Nassau were somewhat above the national average.

In Table 23 the monthly service charges which would have been levied by a number of Nassau banks in 1959 and 1963 on two hypothetical accounts are presented. The most striking feature of the data is that only one of the seven banks changed its schedule of charges between 1958 and 1963. The considerable variation in charges among banks is also of interest, since it implies that customers give less weight to the level of service charges in their choice of bank than to other factors, such as convenience and quality of service offered.[63]

It is evident that the Nassau-based banks did not feel compelled to lower service charges with the advent of the New York City banks. This is consistent with a finding by the New York State Banking Department that the large New York City banks "have generally had the highest charges" for individual checking accounts of any type of bank in New York State.[64]

We may conclude that service charges levied by Nassau County banks are somewhat higher than the average for banks of similar size throughout the country and were virtually unaffected by the entry of New York City banks.[65]

3. *Interest on time and savings accounts*

In Part V we discussed the problems which the increased volume of time and savings deposits and the increased interest paid on these deposits have created for Nassau banks. The other side of the coin is the improved performance from the standpoint of depositors, represented by

[63] Lack of knowledge of comparative charges reflects *the low priority assigned* since the information could be secured with a modicum of effort.

[64] See New York State Banking Department, *Branch Banking, Bank Mergers and the Public Interest*, January 1964, pp. 131-140.

[65] There is some evidence that the banks throughout the country which are the most

Table 23

Monthly Service Charges on Regular Checking Accounts for Selected Nassau County Banks, 1958 and 1963

Bank*	Account A†		Account B‡	
	1958	1963	1958	1963
A	$2.44	$2.44	$3.78	$3.78
B	2.26	2.26	3.52	3.52
C	1.75	1.75	3.05	3.05
D	2.76	2.76	3.52	3.52
E	2.56	3.06	4.02	4.52
F	2.09	2.09	3.18	3.18
G	2.56	2.56	4.02	4.02

*Letter designations for banks vary with each table.

†Account A assumed five deposits of checks per month, 30 checks drawn per month and a minimum balance of $240.

‡Account B assumed ten deposits of checks per month, 50 checks drawn per month and a minimum balance of $480.

Source: Computed from brochures issued by the respective banks.

the increased rates. The ratio of interest paid on time and savings deposits to total time and savings deposits was higher for Nassau-based banks in the aggregate than for all U. S. insured commercial banks in the aggregate throughout the 1958-1963 period. (See Table 22.) The Nassau ratio climbed from 2.65 percent in 1961 to 3.54 percent in 1963.

The picture is similar when the ratio for each Nassau bank is compared with the aggregate ratio for all United States insured commercial banks in the same deposit class. In 1962, the latest year in which the all-bank figure by deposit class was available at this writing, the ratios for 14 of the 15 Nassau-based banks were higher than the all-bank ratios for the comparable deposit classes. (See Table 18.) This showing was due in part to the strong competition for deposits provided by the mutual savings banks and the New York City banks in Nassau. According to the New York State Banking Department, "since the late 1950's, the large New York City banks have paid the highest average interest rate on savings deposits of any type of commercial bank in the State. . . ." [66]

E. Progressiveness in Developing New Products and Techniques of Production

Commercial banking in the United States has been completely remolded, if not revolutionized, during the past two decades by sweeping innovations in data processing, personnel training, techniques of management, types of credit offered, and variety of services offered, among others. There is every indication that a number of Nassau banks have participated in, and at times led, in this innovating process. Electronic data processing has become common. Franklin National was a pioneer in lease financing and last year was in the forefront in offering capital debentures. New techniques of reaching the customer, such as drive-in offices, are in widespread use. While not every Nassau bank has kept pace, the number which have is certainly sufficient to indicate progressiveness in the conduct of banking operations.

sophisticated in their cost-accounting and the most profit-conscious tend to have above-average service charges for individual checking accounts. The officials of these banks maintain that banks with only nominal service charges would alter their policy if they had a better idea of the costs they incur in handling accounts.

Banks with quite low or no service charges are typically small banks operating in small communities. Their officials maintain that when a bank's deposit and lending activities are viewed as parts of an integrated whole, and when it is further recognized that such a bank's depositors are likely to be its borrowers, the no-service-charge policy is quite rational.

It is possible that differentials in labor costs between urban and non-urban areas also have some bearing on service charge levels.

[66] New York State Banking Department, *op. cit.*, pp. 140-141.

In summary, application of the relevant performance tests to the Nassau banking system leads to a favorable rating from the customers' standpoint on most counts. In a number of performance dimensions, there has been marked improvement in the period 1958-1963. There was, however, a notable lack of change in the level of service charges on demand deposits in the face of a substantial increase in the supply of "checking account service." [67]

VII. *Summary and Conclusions*

We have examined the banking structure of Nassau County over the period 1958-1964 with the major objective of observing the operating and performance results of an unusually rapid expansion of banking facilities. The Omnibus Banking Act of 1960 provided a unique laboratory for these observations, lowering as it did the legal barriers to entry into the County by some of the largest banks in the United States.

The considerable expansion of banking facilities in the County reflected not only a response of banking investment to more than a decade of unusual growth in population, income, and industry, but also cognizance by the regulatory agencies of the need for satisfying new demands for banking services through appropriate entry policies. A large part of our study has been devoted to an *ex post* evaluation of the effects of these policies insofar as this can be accomplished by an examination of bank costs and rates of return, the structure dimension of bank performance, and the benefits that have redounded to consumers of bank services.

We adopted the two following interrelated tests of overbanking. (1) Are the rates of return to capital for Nassau banks in the aggregate, and for most individual banks, at a level which threatens the ability of the system to provide an adequate quantity and quality of banking output over the long term? (2) Is the

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[67] Bain's fourth performance dimension, relating to the character of the product and product variety, was treated under our "structure dimension."

We did not devote a separate section to his third performance dimension, relating to sales-promotion costs. While there has been an increase in recent years in the dollar volume of advertising by commercial banks, comprehensive and up-to-date figures are not available. One estimate places advertising expenditures by commercial banks at $195 million in 1962. See Edward W. Reed, *Commercial Bank Management,* New York: Harper & Row, 1963, p. 501. This figure would equal 2.3 percent of total current operating expenses of $8.5 billion for insured commercial banks in the United States. Federal Deposit Insurance Corporation, *Annual Report,* 1962, p. 150.

Nassau bankers cited their disadvantage in advertising, especially via television and radio, compared to the New York City banks. Two relationships are involved, that between a given dollar volume of advertising and the asset or deposit base, and the number of potential customers of a given bank who will be reached per dollar of advertising.

Quite apart from any concern for possible social waste involved (many other industries give much more ground for concern than does banking), advertising expenditures of the banking industry have become sufficiently important as a competitive device to merit study.

Still another performance dimension could be advanced: survival of individual banks. Absence of failures means that customers do not suffer the possible losses and certain inconveniences entailed when a bank is forced to close. The weight given to this dimension would depend on the importance assigned to prevention of *any* bank failures.

Nassau banking system currently performing adequately from the standpoint of its customers, and has there been an improvement or a worsening of this performance in recent years? Application of both tests led to our rejection of the view that overbanking exists in Nassau County. Rates of return are at levels which will allow continued provision of a broad line of banking services and products. The performance of the system from the standpoint of its customers has materially improved in a number of dimensions in recent years.

This overall conclusion is supported by, or consistent with, the following more specific findings:

A. The increase in number of banks and banking offices in Nassau County has not resulted in a deterioration in the aggregate rate of return to capital, either absolutely or relative to all insured banks in the United States. Individual County banks, when compared with insured commercial banks of similar size, show varied results, but on the whole and over time no deterioration in relative returns has occurred. Furthermore, with few exceptions, after-tax rates of return to capital are high enough to refute contentions that the industry is over-invested, subject to over-capacity, or suffering from destructive competition.

B. There can be no doubt that Nassau consumers benefited from the expansion of banking facilities. To a large degree, this took the form of added convenience in conducting banking business. The evidence also indicates that the increase in banking competition, stemming in part from the advent of New York City banks, lowered instalment loan rates. Both results may be attributed to the significant increase in number of offices and number of banks per submarket. It is not unlikely that other loan rates will be more affected than they have been to date by the increase in the number of alternative credit sources. The effective interest rate paid on time and savings deposits has moved steadily toward the permissible maximum, but this result might well have occurred even without the entry of New York City banks. Finally, added competition has not led to significant change in bank service charges.

C. When submarkets of the County are appropriately defined, the distribution of combined offices and the distribution of commercial bank deposits show high and significant correlations with various income and population measures. This is an indication that the facilities expansion of 1961-63 followed a rather consistent pattern throughout the County insofar as its relationship to the economic base of the various submarkets is concerned. This affords evidence that the economic base is a major factor in location decisions of financial institutions and decisions of regulatory agencies on entry proposals. The correlation results also provided evidence that income measures had a stronger relationship to banking structure in Nassau than did population measures alone. One may conclude that the "population per banking office" statistic used alone is an inadequate test of overbanking.

D. Nassau County has a viable, dynamic and balanced banking system which compares very favorably with the banking systems of other areas in the extent to which it meets the needs of its customers. The recent sharp increase in the number of banking offices represented a process of catching up with the growth in demand for banking services in the County.

► ROBERT J. LAWRENCE

Bank Location and the Differential Effects of Monetary Policy: A Case Study

I. *Introduction*

Economists have devoted considerable effort to analyzing the differential effects of monetary policy. Most of the theoretical and empirical research in this area has concentrated on borrower class.[1] Few attempts have been made to determine whether discriminatory effects of monetary policy arise because of the *location* of the borrower. Such discriminatory effects could occur in a nation in which unit or limited branch banking was dominant if the effects of central bank action were unevenly distributed among the banks in the system, because borrowers, with the exception of big businesses which have access to many sources of credit, are not likely to be successful in getting loans from banks located beyond their immediate area. Banks would not wish to grant loans to distant borrowers because of the difficulty of servicing and policing such loans. Locational differences in the impact of monetary policy have been studied by L. L. Watkins [2] and

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This paper presents the principal results contained in a doctoral dissertation written at the University of Michigan in 1963 under a Research Fellowship granted by the Federal Reserve Bank of Chicago. I wish to thank Professors T. G. Gies and R. L. Teigen of the University of Michigan, Professor G. S. Tolley of North Carolina State College and members of the Research Department of the Federal Reserve Bank of Chicago for their helpful comments.

[1] Probably the most exhaustive empirical study is that of G. L. Bach and C. J. Huizenga, "The Differential Effects of Tight Money," *American Economic Review*, LI, March 1961, pp. 52-80.

[2] L. L. Watkins, *Bankers' Balances*, Chicago: A. W. Shaw Co., 1929, p. 345.

more recently by I. O. Scott.[3] These writers concluded that the initial and greatest effects of monetary restraint were felt in the money market banks. This study is a continuation of these efforts to demonstrate locational differences in the impact of monetary policy. Specifically the purposes of this study are: (1) to determine how the reserve positions of banks operating in and serving different economic environments have been affected during periods of monetary ease and restraint between 1953 and 1961; (2) to isolate the factors responsible for any observed differences; (3) to develop techniques for analysis of regional bank data.

II. *The Banks and Their Environment*

To investigate the importance of bank location as a factor influencing the impact of monetary policy, it is desirable to select groups of banks serving very different economic environments. Three groups of banks are being selected for analysis in this study: (1) the Chicago Central Reserve City banks (this classification was terminated on July 28, 1962); (2) all of the member banks (47) serving five suburban counties surrounding the city of Chicago;[4] (3) all of the member banks (76) located outside of the principal cities of nineteen counties in central Illinois, an agricultural area known to regional economists as the Cash Grain Area of the Corn Belt.[5] These three bank groups are to be labeled the C, S and A banks, respectively. The C banks are major financial institutions of the Chicago money market; the S banks serve the suburban communities surrounding Chicago; and the A banks serve the agricultural industry in central Illinois.

The reserve position of each bank group is to be measured by the Reserve Position Ratio (RPR). This ratio is given below. In stating the ratio a factor of one hundred is introduced in order to simplify the presentation and interpretation of results.

$$RPR = \frac{E - B + F + D_f + G}{D_t - C} \times 100 \text{ where}$$

E = excess reserves
B = borrowings from central bank
F = net federal funds purchases (−) or sales (+)
D_f = due from banks
G = U. S. Treasury securities
D_t = total deposits (demand + time)
C = cash items in process of collection.[6]

The numerator of the RPR contains those asset and liability items which banking theory and studies of bank behavior indicate are customarily used by banks to meet increased loan demand and/or deposit drains. Thus the RPR may be considered a measure of the ability of banks to meet loan demands and/or deposit drains. For reference purposes the RPRs of the bank groups as of the Fall 1953 call date, the starting date for this study, were C banks = 42.7; S banks = 61.2; and A banks = 62.4.

In a unit or limited branch banking system[7] like that of the United States it

[3] I. O. Scott, Jr. "The Regional Impact of Monetary Policy," *Quarterly Journal of Economics*, LXIX, May 1955, pp 269-84.

[4] Lake, Kane, Du Page and Will Counties in Illinois and Lake County, Indiana.

[5] For a description of this area see D. J. Bogue and C. L. Beale, *Economic Areas of the United States*, New York: The Free Press of Glencoe, Inc., 1961, pp. 636-639.

[6] It is assumed that the cash items which a bank group is in the process of collecting are equal to the value of cash items being collected against them. It is felt that subtracting cash items from total deposits gives a better measure of actual total deposits.

[7] Illinois Law prohibits branch banking. Indiana Law permits branch banking, but a bank may not establish a branch outside of the county in which the main office is located.

Table 1
Bank Group Loan Portfolios; Range From Fall 1955 to Midyear 1961
(percent of total)

Bank Group	Commercial & Industrial*	Security	Agricultural†	Real Estate	Consumer‡
Chicago	70-75	6-10	0-0	3-5	8-12
Suburban	17-19	1-2	4-4	46-51	25-29
Agricultural	16-19	0-0	42-44	18-18	20-23

* Includes loans to "other financial institutions."
† Includes loans "secured by farm land."
‡ "Other loans to individuals."
Source: Call Report data supplied by the Federal Reserve Bank of Chicago.

is to be expected that banks serving different economic environments will differ in the types of loans in which they specialize and the type of depositor which they serve. That this is true of the three bank groups to be analyzed is shown by the data in Tables 1 and 2. The C banks specialize in business loans; about three-fourths of their loan portfolio consists of commercial and industrial loans. Reflecting the location of these banks in an area where manufacturing industries predominate is the fact that 54 percent of the business loans of the C banks were to manufacturing and mining firms in 1955.[8] The loan portfolios of the S and A banks also reflect their economic environment. The former, located in populous suburban areas, specialize in real estate and consumer loans. The latter, as would be expected, specialize in agricultural loans. The largest share of the business loans of the S and A banks are to local firms, especially retail trade firms.[9] Table 2 presents data on the ownership of demand deposits of individuals, partnerships and corporations (IPC) for those C, S and A banks included in a 1954 deposit ownership survey. While the coverage is small, particularly for the A banks, the distribution of deposits differs between the groups as expected. Business deposits make up over three-fourths of the total deposits of the C banks; demand deposits of manufacturing and mining firms are very important. At the S and A banks personal deposits make up a considerably larger proportion of total deposits than they do at the C banks.[10] Other deposit ownership surveys in later years, though less complete, yield results which are almost identical to those obtained from the 1954 survey.

One other important difference in the three groups of banks should be noted; the C banks have a greater fraction of their total assets committed to loans than the S or A banks. One way of comparing the relative importance of loans in bank asset structures is to compare their loan/deposit ratios. For the call dates between Fall 1955, and Midyear 1961, the average loan/deposit ratios are as follows: C banks = .567; S banks = .352; A banks = .343.

It has been stated that differences among banks in loan specialization and deposit ownership reflect the economic environment which banks serve. But is it possible to attribute differences in loan/deposit ratios to environment? It has been established that the C banks serve primarily businesses while the S

[8] Federal Reserve Bank of Chicago, *Business Conditions*, July 1956, p. 8.

[9] T. H. Schneider, "Diversification of Business Loan Portfolios," Unpublished thesis, Graduate School of Banking, Rutgers University, 1958.

[10] The importance of individual deposits at the S banks is very likely understated since 41 percent of the total deposits (demand + time) of all the S banks are time deposits; this compares with 17 percent and 10 percent for the C and A banks, respectively. *Call Report*, April 14, 1954. It is reasonable to assume that most of the time deposits in the S banks are owned by individuals.

Table 2
IPC Demand Deposit Ownership in Some Chicago, Suburban and Agricultural Banks, January 30, 1954
(percent of total)

Bank Group	Business			Individual			Other§
	Mfg. & Mining Firms	Other Business Firms	Total	Farmers	Other	Total	
Chicago*	42.1	36.5	78.6	0	16.3	16.3	5.1
Suburban†	14.4	38.4	52.8	2.6	37.6	40.2	7.0
Agricultural‡	1.0	13.7	14.7	39.7	43.3	83.0	2.3

* Nine of the 11 banks.
† Twelve of the 47 banks.
‡ Four of the 76 banks.
§ Primarily deposits of nonprofit organizations.

Source: Deposit Ownership Surveys of the Federal Reserve Bank of Chicago, January 30, 1954.

and A banks serve primarily individuals. Differences in the bank loan/bank deposit ratios of businesses and individuals may, in part, account for differences in loan/deposit ratios of commercial banks. Using the Federal Reserve System's deposit ownership surveys of January 29, 1958, and January 27, 1960 (see *Federal Reserve Bulletin*, May 1958, and April 1960), IPC demand deposits for all insured banks can be broken down into deposits of businesses and individuals. IPC time deposits as of December 31, 1957, and December 21, 1959, can also be allocated to businesses or individuals on the basis of deposit breakdowns provided in the Call Reports of June 23, 1958, and June 15, 1960. The estimate of business and individual borrowings at insured banks is derived from loan breakdowns for the December 31, 1957, and December 31, 1959, call dates in the *Federal Reserve Bulletin*. From these calculations, the following loan/deposit ratios at all insured banks are obtained:

	December 31, 1957	*December 31, 1959*
Individuals	.482	.502
Business	.809	.891

On the basis of these results it is concluded that banks which have primarily business customers tend to have higher loan/deposit ratios than banks which serve primarily individuals.

One would expect, given the relative importance of business loan and deposit customers at the C banks and nonbusiness loan and deposit customers at the S and A banks, that the C banks would have a higher loan/deposit ratio than the S or A banks. The loan/deposit ratios for the C, S, and A banks presented above show that this expectation is realized.[11]

III. *Factors Affecting Bank Reserve Positions*

The Reserve Position Ratio (RPR) has been defined as the ratio of assets which banks would be expected to use to meet deposit drains and/or increased loan demand to total deposits adjusted. The major factors affecting a bank's RPR are:

[11] The values for the three bank groups are low relative to those shown for businesses and individuals because government and interbank deposits tend to lower the loan/deposit ratio for all banks since there are few loans asociated with these depositors. The loan/deposit ratio for all insured banks averaged .551 for the period Fall 1955 to Midyear 1961.

(1) deposit flows; (2) changes in loans outstanding; and (3) central bank reserve policy. Deposit inflows will raise the RPR of any bank or bank group. An increase in loans outstanding will reduce the RPR if the bank finances the loan expansion by drawing down excess reserves, borrowing at the central bank or in the federal funds market, drawing down its correspondent balances, or selling government securities. Provision of additional excess reserves by the central bank via open market purchases or reserve requirement reductions will raise the RPR. The expected impact of these factors upon the RPR of the three bank groups will now be considered.

A. Deposit Flows

Little research has been done on the pattern of deposit flows over the business cycle. Those who have given attention to the problem have concluded that during periods of declining economic activity funds tend to flow to the financial centers and during periods of rising economic activity funds migrate from the financial centers to outlying banks.[12] Three reasons can be given for such a pattern of flows. First, during periods of rising economic activity, the increase in wage and salary payments leads to a flow of funds away from the money markets where business firms maintain their principal bank balances to other cities and towns where factories are located. The reduced wage and salary payments and inventory liquidations which occur during economic declines tend to result in return flows to the money markets. Second, outlying banks may reduce their correspondent balances during periods of monetary restraint and then replace them during periods of monetary ease when reserves are plentiful. Third, as banks sell government securities during periods of monetary restraint in an effort to acquire additional reserves, at least the initial impact of such sales would be experienced primarily in the financial centers because the larger banks generally buy and sell securities for the accounts of their correspondents.[13] Conversely, when banks are supplied with additional excess reserves during periods of monetary ease, they tend to add to their holdings of government securities. These purchases, concentrated in the financial centers, give rise to a flow of funds into the money markets.

Between 1953 and 1961 the periods of monetary ease and restraint closely approximated periods of declining and rising economic activity, respectively. Hence, it is expected that deposit flows lower the RPR of the C banks by a greater amount (or raise it by a smaller amount) in periods of restraint than in periods of ease. For the outlying banks, i.e., the S and A banks, it is expected that deposit flows raise the RPR by a greater amount (or lower it by a smaller amount) in periods of restraint.

B. Loan Variations

An increase in loans outstanding will reduce the RPR of any bank or bank group. How much the loans of any bank will expand during a given period depends upon the magnitude of the increase in demand for loans and upon the willingness of banks to grant additional loans. Since the relative willingness of different banks to expand loans is difficult to determine empirically, the hypotheses will deal solely with three factors affecting the loan demand experienced by banks. (1) Differences in loan

[12] This is the position taken by Watkins, *op. cit.*, p. 39 and W. Randolph Burgess in *Reserve Banks and the Money Market*, New York: Harper and Brothers, 1927, p. 110.

[13] Leslie Waller, "Our Unique Correspondent Banking System," *Banking*, August 1961, p. 39.

specialization; a bank group specializing in loan types which exhibit large cyclical fluctuations would have its RPR reduced more in periods of monetary restraint than a bank group which specializes in loans exhibiting little cyclical variability. (2) Differences in the variability in demand within loan categories; a bank group serving an area in which incomes varied greatly would experience greater variability in demand for loans than a bank group serving an area where incomes were relatively stable. (3) Differences in the proportion of assets committed to loans; even if there were no differences in loan specialization or in demand for loans within loan categories, a bank group with a high loan/deposit ratio would find its RPR reduced more during periods of generally rising loan demand than would a bank group with a relatively low loan/deposit ratio.

It is expected that the RPR of the C banks will decline (rise) by a greater amount than the RPRs of the country bank groups in periods of restraint (ease) because of the three loan demand factors discussed above. First, the C banks specialize in commercial and industrial (C & I) loans, a loan class which exhibits substantial cyclical variations. The large variation in business spending for plant, equipment and inventories is well known; hence the demand for loans to finance this spending would be expected to exhibit substantial cyclical movements. Moreover, institutional factors operating in the postwar period have tended to reduce the variability in other types of loans. For example, the use of transfer payments to maintain the level of personal income in recessions tends to reduce the variability in demand for consumer loans. Second, it has been stated that the principal business borrowers at the C banks are manufacturing and mining firms and that durable goods industries predominate in the area, while the business firms served by the S and A banks are mostly local retailing firms. Because manufacturing firms experience greater cyclical variations in the demand for their products than do retailing firms, one would expect greater variability in their demand for bank credit. Thus, within the C & I loan class, the C banks would presumably experience greater variability in demand than the S and A banks. Third, the fact that the C banks have a higher proportion of their assets committed to loans means that, during periods of generally rising loan demand, a given percentage increase in loan demand would reduce the RPR of the C banks more than that of either the S or A banks.

Since the S and A banks have about the same proportion of their assets committed to loans, no difference in loan demand will arise from this demand factor. However, differences in loan demand within loan categories and in loan specialization are expected to produce differences in the behavior of the RPRs of the S and A banks. The S banks are located in an area in which wage and salary workers of the durable goods manufacturing industries are concentrated; hence incomes in this area would be expected to show substantial cyclical fluctuations. The A banks serve an agricultural area. A recent study of the behavior of agricultural income during postwar business cycles finds that since 1954 farm prices and incomes have tended to move contrary to fluctuations in the general economy.[14] Thus the demand for each loan class is likely to have increased (decreased) more at the S banks than at the A banks in periods of restraint (ease) since income in the S banks' area and national income have had the same cycli-

[14] Federal Reserve Bank of San Francisco, *Agriculture and Recent Economic Conditions: Experience and Perspective*, San Francisco: 1959, p. 1.

cal pattern. Also, the demand for agricultural loans, the loan class in which the A banks specialize, is not expected to move in the same direction as the level of economic activity. The demand for the loan types in which the S banks specialize, however, tends to vary directly with the level of economic activity.

C. Central Bank Policies

During the periods of monetary ease between 1953 and 1961, the C banks received greater benefits from reserve requirement reductions than the S or A banks. During periods of monetary restraint the policy has been one of "leaning against the wind." Hence the central bank's addition or depletion of member bank reserves during restraint periods has been a negligible factor in producing differential effects upon the RPR of banks located in different areas.

IV. *Method of Analysis*

The primary source of data for this study is the quarterly Member Bank Call Report. Items which are not included in the call report, e.g., excess reserves and borrowings, are derived from individual bank records maintained by the Federal Reserve Bank of Chicago. Data are available for the three bank groups from 1953 through 1961. In selecting periods of monetary ease and restraint between 1953 and 1961, it is desirable to: (1) select intervals of one year in order to avoid variations arising from seasonal factors; and (2) select the intervals so that, as nearly as possible, the entire interval can be considered one of monetary ease or restraint. In selecting these periods the following indicators of central bank policy are used: (1) policy directives to the Manager of the System Open Market Account from the Federal Open Market Committee; (2) treasury bill rate; and (3) prime commercial rate. With these indicators as guides, the call date intervals representing periods of ease and restraint are selected. These intervals are presented in Table 3.

Table 3
Periods of Ease and Restraint By Call Date Intervals

Period Number	Type of Policy	Call Date Intervals
1	Ease	Fall 1953–Fall 1954
2A	Restraint	Fall 1954–Fall 1955
2B	Restraint	Fall 1955–Fall 1956
2C	Restraint	Fall 1956–Fall 1957
3	Ease	Fall 1957–Fall 1958
4	Restraint	Fall 1958–Fall 1959
5	Ease	Midyear 1960–Midyear 1961

The method of analysis to be employed in this study is known as "shares of the whole" analysis.[15] The purpose of the analysis is to determine the impact of central bank reserve actions, deposit flows and changes in total loans upon the reserve positions of the C, S and A banks.

A. Central Bank Reserve Actions

An increase in the total deposits of all member banks may arise from additional reserves supplied by the central bank, a reduction in reserve requirements, shifts from demand to time deposits, shifts of deposits from banks with higher to banks with lower reserve requirements and/or a reduction in holdings of excess reserves by member banks.[16] To estimate the effect of such a deposit expansion upon the RPR of the three bank groups, two assumptions are made: (1) in the process

[15] This method is discussed in H. S. Perloff, E. S. Dunn, Jr., E. E. Lampard and R. F. Muth, *Regions, Resources and Economic Growth*, Baltimore: Published for Resources for the Future, Inc. by the Johns Hopkins Press, 1960, pp. 67-74. The method has been modified in this paper to meet the specific analytical problems.

[16] The last three are not the result of direct central bank action. However, the central bank could take action to offset these effects if it desired to do so.

of deposit expansion banks acquire only those assets (or reduce the liabilities) included in the numerator of the RPR; (2) the proportion of the increase in member bank deposits which *should have* accrued to each bank group is equal to the ratio of the bank group's adjusted deposits to total member bank adjusted deposits [17] at the beginning of the period. After the "share" of the deposit increase is calculated for a bank group the effect of this deposit increase upon the RPR of the bank group is calculated for, say, period 4 (a restraint period) by adding the increase in deposits, ΔD, to the denominator and $(1-r)\,\Delta D$ to the numerator of the RPR as of Fall 1958, where r is a weighted average of reserve requirements on the deposits of the bank group. The difference between the original RPR (in this case, Fall 1957) and the RPR after the adjustment for the increase in deposits is the estimate of the effect of central bank action upon the RPR of this bank group for period 4. For periods of ease, however, one other calculation must be made. The creation of additional excess reserves by reducing reserve requirements or by permitting the counting of vault cash as legal reserves affects the numerator of the RPR directly. Hence, for each bank group it is necessary to multiply net demand deposits and/or time deposits by the percentage reduction in reserve requirements to determine the additional excess reserves created. (Changes in the amount of vault cash which could be counted as legal reserves are also included here.) Dividing this number by the RPR denominator yields the change in the RPR arising from this source. This value is then added to that computed for the deposit change to give the total change in the RPR arising from central bank reserve action for the ease period. This value is labeled the *central bank effect*.[18]

B. Deposit Flows

Having performed the required calculations for estimating the central bank effect, it is now easy to estimate the effect of deposit flows upon the RPR of each bank group. Continuing with the example of period 4, the estimated increase in deposits due to central bank action has already been added to the Fall 1958 deposit total for each bank group. This new deposit total is then compared with the actual total deposits as of Fall 1959. If the Fall 1959 total is larger (smaller) than the Fall 1958 total, it is considered that the bank group has experienced a deposit inflow (outflow) for the period. The effect of this deposit gain or loss upon the RPR is then calculated in the same manner as the deposit change due to central bank action. The values derived from these calculations are labeled the *deposit share effect* since they indicate whether each bank group received more or less than its "share" of the increase in total member bank deposits.

C. Loan Variations

In calculating the loan effects upon the RPR of a bank group, two assumptions are made: (1) the proceeds of the loan, when spent, are not deposited in a bank included in the group; and (2) the in-

[17] That is demand + time deposits — cash items in process of collection.

[18] This is the estimate of changes in the RPR produced by changes in "total effective reserves." For a discussion of this concept and the difficulties of measurement, see C. Warburton, "Bank Reserves and Business Fluctuations," *Journal of the American Statistical Association*, XLIII, December 1948, pp. 547-558, and G. Horwich, "Elements of Timing and Response in the Balance Sheet of Banking," *Journal of Finance*, XII, May 1957, pp. 238-255.

crease in loans is financed by reducing (increasing in the case of borrowings) the items in the numerator of the RPR. The method described below is designed to measure not only the effects of changes in total loans upon the RPR of the bank groups in periods of monetary ease and restraint, but also the relative importance of differences in loan specialization, loan demand within loan categories and loan/deposit ratios in creating differences between the bank groups in the behavior of total loans.

Let t_1 = total loans of bank group X at beginning of period
t_2 = total loans of bank group X at end of period
T_1 = total loans of all member banks at beginning of period
T_2 = total loans of all member banks at end of period
d = mean RPR denominator of bank group X for period
D = mean RPR denominator of all member banks for period
lij = amount of loan type j (consumer, real estate, etc.) at the i^{th} date for bank group X; i=1 at beginning of period and i=2 at end of period
Lij = amount of loan type j at i^{th} date for all member banks

Then $t_1 = \Sigma$ lij (i = 1, 2; j = 1, 2, . . . , 6)[19]

$T_1 = \Sigma$ Lij (i = 1, 2; j = 1, 2, . . . , 6)

The *total loan effect* for Bank Group X measures the change in the RPR arising from the change in total loans outstanding during the period. It is equal to:

$$(1)\quad \frac{t_1 - t_2}{d} \times 100.$$

[19] The loan breakdown employed in the analysis is: (1) commercial and industrial; (2) agricultural; (3) security; (4) real estate; (5) other to individuals; and (6) other.

The *general loan effect* measures the change in the RPR of the "average" bank, i.e., all member banks, due to the change in total loans during the period. It is equal to:

$$(2)\quad \frac{T_1 - T_2}{D} \times 100.$$

The *loan specialization effect* measures the amount of *deviation* of the total loan effect of Bank Group X from that of the "average" bank, i.e., the general loan effect, arising from the particular loan specialization of Bank Group X. It is equal to:

$$\frac{t_1 + t_1\,\dfrac{(T_2 - T_1)}{T_1} - \left[\, l_{11} + l_{11}\,\dfrac{(L_{21} - L_{11})}{L_{11}} + l_{12} + l_{12}\,\dfrac{(L_{22} - L_{12})}{L_{12}} + \ldots + l_{16} + l_{16}\,\dfrac{(L_{26} - L_{16})}{L_{16}} \right]}{d} \times 100.$$

Let the term in brackets equal t'_2. This effect is then equal to:

$$(3)\quad \frac{t_1 + t_1\,\dfrac{(T_2 - T_1)}{T_1} - t'_2}{d} \times 100.$$

This t'_2 is the value which the total loans of the X banks would have had at the end of the period if each of their loan types had increased by the same percentage as the corresponding loan type of the average bank. Then t'_2 is subtracted from the value which the total loans of X banks would have had at the end of the period, if the total loans of X banks had increased by the same percentage as the total loans of the average bank. Dividing this difference by d and multiply-

ing by 100 yields the effect upon the RPR of Bank Group X.

The *loan differential effect* measures the *deviation* of the total loan effect of the X banks from that of the average bank due to differences in loan demand within the loan categories. This effect is equal to:

$$(4) \qquad \frac{t'_2 - t_2}{d} \times 100.$$

In this calculation the actual value of the X banks' total loans at the end of the period is subtracted from the total loan value which would have existed at the end of the period if each loan category of the X banks had risen by the same percentage as the corresponding loan category of the average bank. Dividing this difference by d and multiplying by 100 measures the effect upon the RPR.

The *loan/deposit effect* measures the *deviation* of the total loan effect of the X banks from that of the average bank due to the difference in loan/deposit ratios. This effect is equal to:

$$(5) \qquad \left[\frac{(T_2 - T_1)}{D} - \frac{(T_2 - T_1)}{\frac{T_1}{d}} \right] \times 100.$$

To calculate this effect the X banks' total loans are raised by the actual percentage increase in total loans experienced by the average bank. Then the decline in the RPR which this loan increase would have produced for the X banks is subtracted from the actual decline in the RPR of the average bank to get the value of the loan deposit effect.

The loan specialization, loan differential and loan/deposit effects taken together explain the total deviation of the X banks' total loan effect from the total loan effect of the "average" bank, i.e., the general loan effect. That is to say, the sum of the general loan, loan specialization, loan differential and loan/deposit effects is equal to the total loan effect of Bank Group X. This equality may be demonstrated by summing equations 2, 3, 4 and 5:

$$\frac{T_1 - T_2}{D} \times \frac{t_1 + t_1 \frac{(T_2 - T_1)}{T_1} - t'_2}{d} + \frac{t'_2 - t_2}{d} + \frac{T_2 - T_1}{D} - \frac{t_1 \frac{(T_2 - T_1)}{T_1}}{d}.$$

Collecting terms yields:

$$\frac{T_1 - T_2 + T_2 - T_1}{D} + \frac{t_1}{d} + \frac{\frac{t_1 (T_2 - T_1)}{T_1} - \frac{t_1 (T_2 - T_1)}{T_1}}{d} + \frac{t'_2 - t'_2}{d} - \frac{t_2}{d} = \frac{t_1 - t_2}{d}.$$

The expression which results is the total loan effect as it was defined in equation 1.

V. *Results*

Table 4 presents the basic results derived from the analytical methods developed in the previous section. Some general comments about these results are necessary. First, the three major factors affecting the RPR are the central bank, deposit share and total loan effects. If banks increased or decreased only those asset and liability items included in the numerator of the RPR *or* loans, the sum of the three effects would equal the actual change in the RPR. The fact that banks do change their holdings of other types of assets, particularly holdings of the obligations of state and local governments, leads to some deviation of the actual change in the RPR from the sum of the three effects. This deviation is

Table 4
Changes in Bank Reserve Positions and Factors Affecting Them; Chicago, Suburban and Agricultural Banks

Bank Group	Description	Type of Monetary Policy—Ease (E) or Restraint (R) (period number)						
		E (1)	R (2A)	R (2B)	R (2C)	E (3)	R (4)	E (5)
C H I C A G O	Actual Change in RPR	+6.4	−11.5	−7.5	−3.1	+10.7	−9.0	+8.2
	Central Bank Effect	+5.5	+ 0.9	+1.0	+1.6	+ 4.8	+1.5	+5.7
	Deposit Share Effect	−0.7	− 2.8	−1.3	−1.6	− 0.6	−2.3	+1.3
	Total Loan Effect	+2.0	− 7.4	−9.3	−5.2	+ 7.2	−8.4	+1.8
	General	−0.5	− 7.1	−6.2	−2.8	− 0.4	−7.3	−1.1
	Loan Specialization	+1.0	− 0.4	−1.2	−0.7	+ 1.7	−0.2	+1.4
	Loan Differential	+1.5	− 0.5	−2.0	−1.5	+ 5.9	−0.9	+1.6
	Loan/Deposit	0	+ 0.6	+0.1	−0.2	0	0	−0.1
S U B U R B A N	Actual Change in RPR	−0.5	− 3.0	−3.1	−1.3	+ 0.8	−4.0	−0.4
	Central Bank Effect	+2.6	+ 0.6	+0.7	+1.0	+ 2.8	+1.2	+4.1
	Deposit Share Effect	−0.3	+ 1.3	+1.0	+0.5	− 0.6	+0.3	−2.1
	Total Loan Effect	−2.4	− 4.0	−3.8	−2.8	− 0.9	−5.5	−2.2
	General	−0.5	− 7.1	−6.2	−2.8	− 0.4	−7.3	−1.1
	Loan Specialization	−0.7	+ 0.4	+0.6	+0.3	− 0.8	0	−0.8
	Loan Differential	−1.5	+ 0.1	−0.8	−1.4	0	−1.0	−0.8
	Loan/Deposit	+0.3	+ 2.6	+2.6	+1.1	+ 0.3	+2.8	+0.5
A G R I C U L T U R A L	Actual Change in RPR	−1.5	− 1.3	−2.3	+0.3	− 1.9	−3.2	−1.5
	Central Bank Effect	+2.6	+ 0.6	+0.7	+1.0	+ 2.9	+1.2	+3.8
	Deposit Share Effect	−1.4	+ 0.2	−0.5	+0.9	− 1.9	−0.4	−1.0
	Total Loan Effect	−3.0	− 1.3	−1.8	−1.7	− 2.8	−4.6	−4.2
	General	−0.5	− 7.1	−6.2	−2.8	− 0.4	−7.3	−1.1
	Loan Specialization	−0.1	+ 1.8	+1.6	+0.9	− 2.1	+0.4	−2.2
	Loan Differential	−2.6	+ 1.5	+0.2	−1.1	− 0.4	−0.5	−1.4
	Loan/Deposit	+0.2	+ 2.5	+2.6	+1.3	+ 0.1	+2.8	+0.5

Source: Computed from Call Report data and data in **Federal Reserve Bulletin** (various issues).

most pronounced for the C banks in periods 2B and 2C. To meet the sharply rising demand for loans, the C Banks made substantial reductions in their holdings of state and local government obligations. Hence, in periods 2B and 2C the sum of the three effects is considerably larger than the actual change in the RPR. In all other periods the three bank groups purchased relatively small amounts of such obligations; thus the deviation for other periods is much smaller. Second, a + (−) preceding the magnitude for these major effects means that the particular effect raised (lowered) the RPR. Third, it is clear that the C banks experienced much larger variations in their RPR than did the S or A banks. This was expected. In the following sections the reasons for this pattern are to be explored.

A. Central Bank Effect

Because reductions in reserve requirements and/or permission to count vault cash as legal reserves have been granted during the three periods of monetary ease, the magnitude of the central bank effect is larger during these periods than it is for the periods of restraint. More-

over, the magnitude of this effect for the C banks in ease periods is much larger than that of either of the two country bank groups because the central reserve city banks have been the principal beneficiaries of reserve requirement reductions.[20]

B. Deposit Share Effect

The hypotheses set forth earlier on deposit flows for the three bank groups were: (1) the C banks should experience greater outflows (or smaller inflows) in restraint periods than they do in ease periods; (2) the S and A banks should experience greater inflows (or smaller outflows) during periods of restraint. The results support the hypothesis for the C banks if the three highest values for the deposit share effect occur in the ease periods and the four lowest values occur in the restraint periods. A check of Table 4 reveals that the results agree with those expected. Moreover, the results may be considered significant at less than the .05 level.[21] The results support the hypothesis for the S and A banks if the four highest values lie in the restraint cells. These are the results obtained and they may also be considered significant at less than the .05 level.[22]

C. Loan Effects

The total loan effect for any bank group is equal to the sum of the general loan, loan specialization, loan differential and loan/deposit effects. Since the general loan effect is by definition equal for all three bank groups, differences in the behavior of total loans at the three bank groups are explained by the last three loan effects. To determine whether the direction and magnitude of these loan effects are related to periods of monetary ease and restraint, the values of, say, the loan differential effect for one bank group may be compared with that of the other groups in the corresponding ease or restraint periods.

An example may be used to illustrate the method and the nature of the tests to be employed. Below are listed the values of the *loan differential effect* for the S and A banks (data are from Table 4). The values for the A banks are subtracted from those for the S banks in the corresponding period, and the average difference for the ease and restraint peri-

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[20] The magnitude of the central bank effect is slightly larger for the C banks in restraint periods because the change induced in the RPR by a given increase in deposits is greater for banks with a lower RPR than for banks (i.e., the S and A banks) with a higher RPR.

[21] Suppose we have 7 balls, 3 marked H and 4 marked L. We draw without replacement, placing one ball in each of the seven cells. The probability that the balls marked H will be in cells 1, 3 and 5, as hypothesized, is equal to

$$\frac{3!\ 4!}{7!} = 1/35.$$

The result of +1.3 in cell 5 of the C banks deserves comment since its deviation from the outcomes in the other ease cells is large. In December 1960 the major Chicago banks began issuing marketable time certificates of deposits, the purpose of which was to stem the long-term loss of deposits which the money market banks have experienced. By June 1961 (the end of period 5) data compiled by the Federal Reserve Bank of Chicago show that the C banks had issued $250 million of these certificates. Even assuming that all of these deposits were acquired from other banks, the value of the deposit share effect for period 5 would have been −0.9 had the C banks not issued the certificates. This value agrees closely with the results for the other ease periods. The important point, however, is that the value −0.9 is higher than any of the values for the restraint periods; hence, the outcome of the probability test would have been the same if no certificates had been issued.

[22] The relatively large negative value for the deposit share effect of the S banks in period 5 suggests that their deposits have been adversely affected by the certificate of deposit.

ods is computed. The value of +0.7 RPR units, the average difference for the ease periods, means that on the average in periods of ease the S banks experienced a smaller decline in their RPR than the A banks due to differences in the demand for loans within the six loan categories. Similarly the value of −0.8 for S minus A in restraint periods means that on the average in restraint periods the S banks experienced a greater decline in their RPR due to differences in loan demand within the loan categories.

Ease

Period Number	S Banks	A Banks	S Minus A
1	−1.5	−2.6	+1.1
3	0	−0.4	+0.4
5	−0.8	−1.4	+0.6
Avg.			+0.7

Restraint

Period Number	S Banks	A Banks	S Minus A
2A	+0.1	+1.5	−1.4
2B	−0.8	+0.2	−1.0
2C	−1.4	−1.1	−0.3
4	−1.0	−0.5	−0.5
Avg.			−0.8

The hypothesis relating to the demand for loans within loan categories was that the S banks would experience greater declines (increases) in demand in periods of ease (restraint) than the A banks. One way of testing the results obtained would be to employ the t-test to determine whether or not the two means, +0.7 and −0.8, differ significantly from zero. In this case, −0.8 does and +0.7 does not differ significantly from zero. A second test is also possible. The hypothesis as stated calls for a specific distribution of plus and minus signs among the seven cells. Specifically, it calls for a plus sign in all ease periods and a minus sign in all restraint periods. Note that this is the sign distribution obtained. The probability of getting such a distribution by chance is $1/2^7 = 1/128$. Thus, if the signs correspond to those called for in the hypothesis, it can be said that this test, labeled the P-test, is satisfied at the .01 level of significance. Note that even one deviation from the hypothesized distribution of signs will fail to satisfy the P-test since the probability of the occurrence of one deviation from the hypothesized distribution *or* the hypothesized distribution is $8/128 = 1/16$ which exceeds the .05 level of significance. Both the t-test and P-test were employed in testing the data in Table 4, and the results are presented in Table 5.

One other test of the data is relevant. It is possible to determine whether the *absolute magnitude* of the loan differential effect differs significantly between ease and restraint. In the example used above it is to be determined whether or not the absolute values of the two means, 0.7 and 0.8, differ significantly. To test this, the t-test for differences in two means is employed. In this case there is no significant difference in the magnitudes of the two means, and the null hypothesis that $\overline{|E|} - \overline{|R|} = 0$ is not rejected. The results for this test are also presented in Table 5.

The results presented in Table 5 show that in periods of restraint changes in total loans reduce the RPR of the C banks by a much greater amount than the RPR of either of the country bank groups. In periods of ease the change in total loans raises the RPR of the C banks by a greater amount. Neither of these results is surprising, but the reasons for this pattern have never been fully explored. The results in Table 5 show that in restraint these differences in the behavior of total loans exist primarily because of differ-

Table 5

The Total Loan Effect and Its Components; Comparison of Bank Groups

Bank Group	Type of Loan Effect	Average in Ease $\overline{E}$	Average in Restraint $\overline{R}$	Confidence Level of P-test	Confidence Level of $\overline{\lvert E \rvert} - \overline{\lvert R \rvert}$
Chicago minus Suburban	Total	+5.5	−3.6[r]	.01	N
	Specialization	+2.1[r]	−1.0	.01	.05
	Differential	+3.8[r]	−0.4[f]	N	.05
	/Deposit	−0.4	−2.2[r]	n/a	.01
Chicago minus Agricultural	Total	+7.0	−5.3[r]	.01	N
	Specialization	+2.8	−1.8[r]	.01	.05
	Differential	+4.5[r]	−1.2	.01	.05
	/Deposit	−0.3	−2.2[r]	n/a	.01
Suburban minus Agricultural	Total	+1.5	−1.7[r]	.01	N
	Specialization	+0.7[f]	−0.8[r]	N	N
	Differential	+0.7	−0.8[r]	.01	N
	/Deposit	+0.1	0	n/a	N

[r] = significantly different from zero at less than the .05 level.
[f] = failed to satisfy the P-test.
n/a = not applicable.
N = not significant at the .05 level.

Source: Computed from data in Table 4.

ences in loan specialization at the C banks and country banks and because of the higher loan/deposit ratio of the C banks. Note that, in the comparison of the C and S banks, the mean of the loan differential effect in restraint does not differ significantly from zero, and note also that the values for the loan differential effect in restraint are responsible for the failure to satisfy the P-test. In the comparison of the C and A banks the mean of the loan differential effect is the only one which does not differ significantly from zero. In the ease periods, however, it is clear that the difference between the C and country bank groups in the behavior of total loans is explained by the fact that the C banks specialize in a very volatile type of loan and that, even disregarding differences in loan specialization, loan demand at the C banks declines more sharply than it does at the country banks. The results also suggest that in ease periods the loan differential effect is the most important of the loan effects. Clearly, differences in loan/deposit ratios are not an important factor in periods of ease.

Additional support for the results discussed above is derived from the results of the tests of $\overline{|E|} - \overline{|R|}$. In the comparison of the C banks with both country bank groups, the results show that the absolute values of the means of the loan specialization and differential effects are significantly greater in the ease periods than they are in the restraint periods. The magnitude of the loan/deposit effect, on the other hand, is significantly greater in periods of restraint than it is in periods of ease.

The important conclusions about the relative impact of changes in total loans upon the RPR of the C banks vis-a-vis the country bank groups may now be summarized. In restraint periods the RPR of the C banks declines by a greater amount than the RPRs of the country

banks due to changes in total loans. The fact that loan demand within each loan category increased at a greater rate at the C banks is the *least important* reason for the observed difference. The particular loan specialization and the higher loan/deposit ratio of the C banks are more important, the latter seemingly the most important. On the other hand, the evidence suggests that this percentage change in loan demand within loan categories becomes the *most important* reason in ease periods in explaining the different behavior of total loans at the C banks. Differences in loan specialization are also important, but the difference in loan/deposit ratios is of virtually no significance in periods of ease.

Checking now the comparison of the S and A banks, the results are as hypothesized: the S banks have their RPR reduced more (less) than the A banks in periods of restraint (ease) due to changes in total loans. In restraint this is due about equally to the loan differential and specialization effects; both are of the same magnitude, and both satisfy the P-test and t-test. In ease these two effects are also of equal magnitude, but the loan specialization effect fails to satisfy either the P-test or t-test. The results for the differential effect do satisfy the P-test.

In periods of restraint the C banks differ about as much from the S banks as the latter differ from the A banks because of the combined effect of differences in loan specialization and differences in loan demand within the loan categories. What sets the C banks apart from the country bank groups is, clearly, the higher loan/deposit ratio of the C banks. In periods of ease, however, it is the particular loan specialization of the C banks and the sharp decline in loan demand within loan categories that the C banks experience which differentiates them from the country bank groups.

Table 6

The Total Effect in Periods of Ease and Restraint; Chicago, Suburban, and Agricultural Banks

Bank Group	Average in Ease $\bar{E}$	Average in Restraint $\bar{R}$	$\bar{E}-\bar{R}$ $(\pm t_{.05}\bar{E}-\bar{R})$
Chicago	+9.0	−8.3	+17.3(±4.3)
Suburban	+0.3	−2.4	+ 0.2(±2.7)
Agricultural	−1.7	−1.5	− 0.2(±2.7)

Source: Computed from data in Table 4.

D. Summary

As an aid to summarizing all of the results presented thus far, the three major factors affecting the RPR (total loan, deposit share and central bank effects given in Table 4) are totaled for each bank group for each of the seven periods. These values are labeled the *total effect*. Then the average for the three periods of ease and the average for the four periods of restraint are computed. The difference in the two means is then calculated. The results of these computations are presented in Table 6. To test the significance of the difference in the means, the null hypothesis that the two sample means are from the same population is tested, i.e., that E-R=0. Confidence intervals are computed for the values of E-R by multiplying the value of $t_{.05}$ by the standard error of the difference in the two means. If the value of E-R differs significantly from zero the null hypothesis is rejected. In interpreting the values for E and R the + (−) means that the RPR of the bank group was raised (lowered) by the combined action of the three effects. The value for E-R simply tells the average movement of the RPR over an ease-restraint "cycle" due to central bank action, deposit flows and changes in total loans.

The values for E-R in Table 6 show that the average variation in the RPR of the C banks over an ease-restraint "cycle" is much greater than the average variations in the RPRs of the two country bank groups. The reasons for this pattern are clear; every one of the effects analyzed in this study works to produce this result. The differences in loan specialization, loan/deposit ratios, loan demand within loan categories, patterns of deposit flows and central bank reserve policy[23] all combine to produce the greater RPR fluctuation of the C banks. However, the relative importance of each of the effects differs in ease and restraint. In ease, differences in loan specialization, loan demand within loan categories, deposit flow patterns and central bank policy are important. In restraint it is differences in loan/deposit ratios, loan specialization and deposit flow patterns which are most important.

Turning now to the country bank groups, it can be stated that the amount of variation in the RPR of the S banks, while only about one-sixth that of the C banks, is significantly different from zero. The RPR of the S banks declined during periods of restraint and remained virtually unchanged during ease periods. The results for the A banks, however, are surprising. Even though central bank policy sought to raise the RPR of banks in the ease periods, this group of seventy six banks experienced no significant difference in the movement of their RPR in ease and restraint periods; their RPR declined by about the same amount regardless of the type of monetary policy which was in effect. The reasons for this pattern are clear when the data in Table 4 are analyzed. First, the A banks' total loan effect does not differ significantly between ease and restraint. Second, the E-R values of the deposit share and central bank effects are of about equal magnitude but of opposite sign. Deposit flows are more unfavorable during ease periods; i.e., deposit flows reduce the RPR by a greater amount in the ease periods than they do in the restraint periods. Central bank reserve actions, on the other hand, raise the RPR by a greater amount in the ease periods.

[23] The central reserve city banks have been the principal beneficiaries of reserve requirement reductions in periods of ease.

VI. *Conclusions*

The results derived in this study indicate that banks which serve primarily nonfarm business borrowers and depositors experience the greatest decline in reserve positions during periods of monetary restraint. This results not only from the fact that such banks specialize in commercial and industrial loans, but also because these banks have relatively high loan/deposit ratios (since businesses have higher bank loan/deposit ratios than individuals) and because these banks experience substantial deposit outflows during periods of restraint. In general, then, one would expect the impact of monetary restraint to be concentrated in banks located in the major commercial centers. Whether banks respond to declines in their reserve positions by reducing the availability of credit or by raising the cost of borrowing, it is likely that the marginal borrowers who are eliminated by such actions are the borrowing customers of these "business" banks.[24] On the other

[24] The results in this study suggest that such credit rationing may have occurred. It was hypothesized that the loan differential effect would reduce the RPR of the C banks by a greater amount than that of the S banks in periods of restraint. However, no significant difference was found to exist. This means that loan demand did not rise at a greater rate at the C banks as hypothesized *or* that loan demand did rise at a faster rate but the C banks countered this greater demand by rationing credit and/or by raising borrowing costs.

hand, borrowers (primarily individuals and farm businesses) at the outlying banks probably experienced little or no change in credit availability and/or the terms of credit. This suggests that the total monetary resources of a unit banking system are not allocated to the highest bidders for these resources.

Contrast the above situation with the one which would prevail in a nationwide branch banking system. If borrowers in the commercial centers were outbidding borrowers located in outlying regions, the monetary resources of the banking system would flow to the branches located in these centers. Regardless of the location of the principal source of increased demand for bank credit, all borrowers would be affected. If the banks responded to the decline in their RPR by rationing credit, the impact upon borrowers would depend upon the way bankers chose to allocate their limited resources. If the banks responded by raising the cost of borrowing, the marginal borrowers eliminated by monetary restraint would be those whose demand for credit was most sensitive to changes in borrowing costs.

The results of this case study also have implications for periods of monetary ease. It has been shown that the C banks experienced large declines in the demand for loans during periods of declining economic activity. Thus the rise in the RPR of the C banks in periods of ease is due, at least in part, to this decline in loan demand. Now when the central bank decides to follow a policy of monetary ease, it provides additional reserves to the banking system so that borrowers can be more easily accommodated by banks and/or can borrow at lower cost. The results of this study suggest that the increased liquidity of the money market banks during the ease periods arose because of the decline in demand for loans as well as the provision of additional excess reserves by the Federal Reserve System.

Take period 3 for example. Admittedly this is an extreme case but the pattern is similar in periods 1 and 5. In period 3 there was a rise of 7.2 in the RPR of the C banks because of the decline in total loans. The estimated effect of additional reserves supplied by the central bank is +4.8. Thus, in this period the decline in loans led to a greater rise in the RPR of the C banks than did central bank action. Further, the reductions in reserve requirements, which accounted for most of the RPR increase due to central bank action, were not put into effect until February, March and April of 1958. This was five months after the beginning of period 3. It is likely that prior to these reductions in reserve requirements the RPR of the C banks had been raised substantially because of the decline in total loans. That is, it was not a case of easier money market conditions stimulating the demand for loans. Rather, it was the decline in the demand for loans which produced the easier conditions in the money market.

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The Monetary Cycle and the Business Cycle: The Flow of Funds Re-Examined

I. *Introduction*

Recently there have been two studies of the anatomy of the money and capital markets and the impact of business and monetary conditions on these markets. E. T. Weiler analyzed the effect of "severe monetary restraint" on the flow of funds among various institutions and sectors of the economy.[1] He did so by dividing the years 1946-57 into tight and easy money periods and comparing the flows during the different intervals. J. G. Gurley analyzed the effect of the business cycle on the flows by dividing the years 1947-58 into three stages of the business cycle and comparing the corresponding flows.[2]

A major shortcoming of both studies was the failure to distinguish between the separate effects of the business cycle and the monetary cycle. Often the upswing phase of the business cycle and the tight

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[1] Emanuel T. Weiler, *The Flow-of-Funds Approach to Social Accounting*, A Report of the National Bureau of Economic Research, Princeton University Press, 1962, pp. 239-256 (reprinted by Purdue University Institute for Quantitative Research as Reprint No. 49).

[2] John G. Gurley, "Liquidity and Financial Institutions in the Postwar Economy," U. S. Congress, Joint Economic Committee, *Study of Employment, Growth and Price Levels*, January 1960. Gurley also commented on Weiler's article: Weiler, *Flow-of-Funds*, *op. cit.*, pp. 256-262.

money phase of the monetary cycle are treated as synonymous even though they imply quite different phenomena. The upswing refers to a period of increasing economic activity as determined by the NBER reference dates,[3] while we would define tight money as a condition characterized by an excess demand for loanable funds. Empirically, tight money is thus reflected in rising interest rates. It shall be shown that specific phases of the different cycles do not always coincide, and more importantly, that the effects of the business and monetary cycles on the flow of funds are not the same. Weiler showed an awareness of the intertwined effects of the cycles on two different occasions.[4] Gurley, however, seems to have completely disregarded any possible monetary effects, since he treated all postwar business cycles as similar, despite the fact that money was not tight until after the accord of 1951.

We shall analyze the flow of funds for the period 1952-62 by classifying the quarterly data both by the phase of the business cycle (upswing or downswing) and by the phase of the monetary cycle (tight or easy).[5] By holding the phase of one of the cycles constant, the "pure" effect of the other can be determined. The use of quarterly seasonally adjusted data will also be an improvement over the earlier studies for which only yearly data were available.[6]

Section II of this paper selects the sectors and instruments to be included in the analysis and describes the method of determining tight and easy quarters and of dividing the forty-four quarters into our two-variable (business versus monetary cycle) classification. Section III presents the findings of the study and compares them with those of Weiler and Gurley. The final section uses our results to examine both the Gurley-Shaw thesis and the contribution of the Treasury's debt management operations to the Federal Reserve's contra-cyclical policies.

II. *Methodology*

A. Selection of Important Sectors and Instruments

The Federal Reserve's flow of funds accounts divide the economy into nine sectors, indicating for each sector the net acquisition of real and financial assets and the net increase in "liabilities" (in-

[3] These dates do not coincide perfectly with turning points in output. See George Cloos, "How Good Are The National Bureau's Reference Dates?" *Journal of Business*, XXXVI, January 1963, pp. 414-432, and the subsequent discussion in the April and July issues of the same journal. If the quarters were classified according to increasing and decreasing output as measured by real GNP, only two marginal quarters would need to be reclassified, and no significant changes in results would occur.

[4] When Weiler noted that the consumer sector increased its holding of time deposits, savings deposits, and shares in savings and loan associations, he added, ". . . but it is difficult to say whether this was due to prosperity or to tight money." Likewise, when noting that corporations reduced their reliance on mortgages and increased their sales of long term securities, he continued, ". . . but, again, it is difficult on the basis of the evidence to say that this was due to tight money." Weiler, *The Flow-of-Funds*, *op. cit.*, pp. 244, 245, respectively.

[5] While this study spans only forty-four quarters, or three cycles, we feel that the period is long enough to yield definite conclusions; however, it is not so long that the average behavior of different sectors and institutions during the period differs greatly from their present behavior.

[6] The data, with the exception of the last two quarters of 1962, are contained in "Flow of Funds Seasonally Adjusted," Federal Reserve Supplement, 1963. The data for the excluded quarters were taken from the April 1963 issue of the *Federal Reserve Bulletin*. Annual revision of the accounts to reflect revisions in income and product accounts and new financial data as well as changes in seasonal adjustments of the accounts are published in the August *Bulletin*. As empirical work for the paper was completed before August, the 1962 data are not revised.

cluding proprietorship claims) in the form of numerous financial and credit market instruments. The flows, reported quarterly and adjusted seasonally, are *net* flows; i.e., the sales of a financial or credit market instrument are subtracted from the purchases to obtain the acquisition during the quarter.[7] Only the important sectors and the important instruments in those sectors are included in our analysis. A sector is considered important if it provides or purchases a significant proportion of the total net flow of the entire economy over the period, or if its net acquisition of assets or liabilities is highly variable. This criterion of largeness in size or range enables us to analyze sectors that are significant only in a particular phase of the business or monetary cycle, as well as those sectors that are generally significant.

The average quarterly net acquisition of assets for the economy during the period was approximately $75 billion and that of the liabilities was $72 billion. A sector having an average net acquisition of less than $5 billion (about seven percent of the total) or a range of less than $15 billion was judged not significant. The range was calculated by subtracting the average of the lowest three quarters from the average of the highest three quarters.[8] If the average size or range is significant for either the net total assets or liabilities, the sector was included.

Applying this criterion, the sectors included in the analysis are: Consumer and Non-Profit Corporate Non-Financial Business, Corporate Non-Financial Business, Federal Government, State and Local Government, Commercial Banking and Monetary Authorities, and Non-Bank Finance. All except Federal Government, which had a range of $28 billion, qualified by average size; only State and Local Government, which had an average size of $6 billion, failed to qualify by range. The sectors excluded were: Farm Business, Non-Corporate Non-Financial Business, and Rest of the World. The data are given in Appendix A, Table A-1.

An important instrument (with respect to size) constitutes more than its share of the total net acquisition of assets or net increase in liabilities of a sector. (If a sector has eight instruments, a financial instrument accounting for more than one-eighth of the acquisition is included in the analysis.[9]) An important instrument (with respect to range) has a range greater than $10 billion. The number of important instruments in a sector varies from nine in the Corporate Non-Financial Business and Commercial Banking sectors to four in the State and Local Government sector. Table A-2 in Appendix A gives the data. The important financial and credit market instruments are listed at the beginning of each sector.[10]

[7] In practice this figure is obtained by subtracting year end amounts outstanding. For corporate bonds and stocks, valuation is made at issue prices.

[8] A large range can be a result of either a large fluctuation between phases of the business or monetary cycles or a large trend. The large fluctuations are important in the analysis while the secular trend is not meaningful. Our range cutoff, however, is so large relative to our average size cutoff that an instrument having a large trend only, without large fluctuations, would have been included on the basis of average size anyway.

[9] In the numbering of the instruments the most detailed breakdown available in the flow of funds data is used. Thus, if the breakdown of assets lists short term and long term Federal obligations separately, rather than in aggregate, each item is counted as a separate instrument.

[10] Note the asymmetry in the selections. Instruments which appear in more than one sector are often included in some sectors and excluded in others. We are directly concerned with each sector's use of instruments, not with the movement of instruments between sectors. If the latter were the objective, any instrument which was important in any sector would have had to have been included in all sectors. However, some knowledge of movements of instruments between sectors can be gained from the analysis. See *Effects of the Cycles on Intersectoral Flows in* Section IIIC.

B. Classification of Quarters

To disentangle the effects of the business and monetary cycles the quarters are divided into four categories as indicated in the following table:

	Upswing	Downswing
Tight	I	II
Easy	IV	III

We had hoped to compare the averages of the quarterly flows in classification I with those of II and similarly, those of III with those of IV, thus testing the effect of the business cycle on the flows while holding monetary conditions constant—first at tight and then at easy.[11] Likewise we would have liked to compare I with IV and II with III, thereby testing the effect of the monetary cycle while holding the business cycle constant at upswing and downswing, respectively. As shall be seen, however, the small frequency of one of the classifications makes the double comparison impossible.

The indicator of monetary conditions is the direction of movement in the interest rate. However, the particular interest rate chosen is not critical since during the period 1952-60, non-lagged interest rates have generally moved in the same direction.[12] For the years 1961-62, when the use of the Treasury bill rate is suspect, the long term U. S. Government rate is also considered as a check on our classification technique (see note 17). As the representative rate we selected the most sensitive of the rates, the rate on Treasury bills.[13] A rising rate, denoting an excess demand for loanable funds, is taken as an indication that tight money exists, while a falling rate indicates easy money. If the rate does not change between quarters, the quarter is classified according to the most recent change in the rate. The interest rate indicator, however, must be used with care. If the rising rate is due to a rightward shift in the liquidity preference schedule, easy money, caused by an excess of saving over investment, might result during the same quarter. Also, being very sensitive, the bill rate might occasionally reflect very temporary, rather than more permanent swings in market conditions. Thus as a check on the interest rate, we employ three supplementary indicators—the rediscount rate of the Federal Reserve Bank of New York, net free reserves, and purchases of Federal obligations by the commercial banking system. In order to include a direct policy variable, a rediscount rate was used. That of the Federal Reserve Bank of New York was chosen because it generally adjusts to market conditions more quickly than the rediscount rates of other banks in the system.[14] Again a rising rate indicates tight money and a falling rate, easy money. Net free reserves (excess reserves less borrowings

[11] To make averaging over the three business cycles since 1962 meaningful, we assume that the cycles have had similar effects on the flow of funds. Gurley implicitly made the same assumption when he computed averages for recovery, prosperity, and recession years.

[12] Refer to the charts in the Federal Reserve's *Historical Chart Book*, 1963, pp. 25, 27, and 31. If a different rate, say the Corporate Aaa or the long term Government rate had been substituted for the bill rate, only two marginal quarters would be classified differently. The change in the resulting averages would be negligible.

[13] Since the interest rate is given monthly and we are only classifying quarters, the three monthly rates in each quarter were averaged to obtain the quarterly rate.

[14] For a discussion of regional differences in the adjustment of the discount rates from 1950-58, see Hobert C. Carr, "A Note on Regional Differences in Discount Rates," *Journal of Finance*, XL, March 1960, pp. 62-68. Since 1958 there have been six changes in the discount rate, and the New York bank has led five times.

Table 1

Classification of Quarters Into Categories, I, II, III, IV

	1952				1953				1954				1955				1956				1957				1958				1959				1960				1961				1962			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
M	E	T	T	T	T	T	E	E	E	E	E	E	T	T	T	T	T	T	T	T	T	T	T	E	E	E	T	T	T	T	T	T	E	E	E	E	E	E	E	T	E	E	E	E
B	U	U	U	U	U	U	D	D	D	D	D	U	U	U	U	U	U	U	U	U	U	U	D	D	D	U	U	U	U	U	U	U	D	D	D	D	D	U	U	U	U	U	U	U
C	4	1	1	1	1	1	3	3	3	3	3	4	1	1	1	1	1	1	1	1	1	1	2	3	3	4	1	1	1	1	1	1	3	3	3	3	3	4	4	1	4	4	1	4

M refers to the monetary cycle (see Table B-1, Appendix B).
E denotes easy money.
T denotes tight money.
B refers to the business cycle (see Table B-2, Appendix B).
U denotes upswing.
D denotes downswing.
C is the final classification. Arabic numbers have been substituted for Roman numerals to condense the table.

at Federal Reserve Banks) has often been employed by analysts with negative net free reserves indicating tight money and positive net free reserves, easy money. While there is reason to doubt this division (Why should normal excess reserves equal normal borrowings at Federal Reserve Banks?), we accept it for a lack of a better one.[15] Since commercial banks respond to an excess demand for loanable funds by liquidating their holdings of Federal obligations, we use this action as an indication of tight money, and the building up of these holdings as an indication of easy money.[16] If the classification of a quarter by all three supplementary indicators disagrees with the classification by the interest rate, the interest rate is ruled "incorrect." Over the forty-four quarters, the interest rate was incorrect only five times.[17] Table B-1 in Appendix B contains the details of the classification, and row 1 of Table 1 above gives the results.

The business cycle classification is determined by the National Bureau's reference dates. Row 2 of Table 1 gives the business cycle classification (Table B-2 in Appendix B lists the reference dates), and row 3 of Table 1 lists the final classification of the quarters. There are twenty-four quarters in I(U-T), one in II(D-T), eleven in III(D-E), and eight in IV (U-E). Because classification II has a sample size of only one, making comparisons of averages meaningless, our double comparison is impossible. Hence the effect of the monetary cycle will be ana-

[15] There are even strong theoretical objections and empirical evidence questioning the entire concept's usefulness. See A. James Meigs, *Free Reserves and the Money Supply*, Chicago: the University of Chicago Press, 1962.

[16] Movements of interest rates on bank loans are not useable as an indicator of tightness or ease since they are known to respond to changes in credit conditions only after a lag. See Stephen H. Axilrod and Ralph A. Young, "Interest Rates and Monetary Policy," *Federal Reserve Bulletin*, vol. 48, September 1962, pp. 1113-1114.

[17] The quarters for which the bill rate was incorrect are: 4-54, 1-60, 1-62, 2-62, and 4-62. The last three "errors" are possibly a consequence of the recent Treasury-Federal Reserve policy directed at changing the yield curve to prevent an outflow of gold. Movements in the long term Government rate during 1962 can be used to check our classification techniques. After rising in late 1961, it fell throughout 1962 with the exception of July. Hence it would also lead us to classify 4-61 and 3-62 as tight quarters and the other quarters of 1962 as easy. Our supplementary indicators appear to have complemented the bill rate quite well.

Table 2

Consumer and Non-Profit Organizations
(Quarterly Average Flow at an Annual Rate in Billions of Dollars)*

	III(D-E)	IV(U-E)	I(U-T)
Total Assets	23.1	36.5	29.1
Savings Accounts at Commercial Banks	3.7	7.7†	3.3
Savings Accounts at Savings Institutions	8.1	10.3	7.6
Saving Through Life Insurance	3.1	4.0	3.6
Saving Through Pension Funds	6.1	7.2	5.3
Federal Obligations	− 4.2	0.3	1.9
Total Liabilities	11.8	16.4	16.9
1-4 Family Mortgages	8.8	11.9	10.9
Consumer Credit	1.6	3.0	4.8

* Instrument values do not add up to the total since some instruments are not included.
† See note 20.

lyzed by comparing classifications I and IV, where the business cycle is constant at upswing; the effect of the business cycle will be analyzed by comparing classifications III and IV, where the monetary cycle is constant at easy.[18]

III. *Results*

The results are presented in three subsections. The analysis specifies (1) the effect of the business cycle on the average rate of net acquisition of financial and credit market instruments by each sector; (2) the effect of the monetary cycle on the average rate of net acquisition of instruments by each sector; and (3) the implications of these effects on inter-sectoral flows. Comparisons of our findings with those of Weiler and Gurley will be included in (2) and (3) respectively.

Since neither cycle affects the holdings of the State and Local Government sector significantly, this sector is not discussed separately below. The relative distribution of its liabilities as well as the total increase in liabilities remains nearly constant throughout. Also, its net acquisition of asset instruments is too small to reveal significant differences between classifications.

A. Effect of the Business Cycle

Differences in the rate of acquisition of financial and credit market instruments due to the effect of the business cycle are determined by comparing classifications III (D-E) and IV (U-E). The data are given in columns 1 and 2 of Tables 2-6.[19] In the next section columns 2 and 3 of

[18] It should be noted that we are not completely distinguishing the effects of the business and monetary cycles. We are analyzing the business cycle when money is easy, or in only 18 of the 44 quarters since 1952. Also, we are studying the effect of the monetary cycle only on the business upswing. This, however, includes 32 of the 44 quarters and is the phase where monetary policy is most important.

[19] If a secular trend exists in the acquisition of any financial asset or liability by any sector, a bias will result because the quarters in classification IV are concentrated at the late end of our period 1952-62. In particular, if an upward trend exists, the average annual rate of acquisition of an instrument will be greater in IV than in I or III, solely due to trend. This is shown in Appendix C, a general discussion of trends. An attempt is made to adjust for trends when interpreting the data.

Table 3

Corporate Non-Financial Business
(Quarterly Average Flow at an Annual Rate in Billions of Dollars)*

	III(D-E)	IV(U-E)	I(U-T)
Total Assets	0.8	9.8	9.6
Demand Deposits and Currency	−0.5	0.2	0.4
Federal Obligations	−1.8	−0.8	1.1
Trade Credit	0.7	5.5	6.2
Other Financial Assets	1.4	1.4	1.6
Total Liabilities	7.1	13.1	15.2
Corporate Bonds	4.3	4.3	3.8
Corporate Stocks	1.8	2.0	2.1
Mortgages	2.2	3.6	2.5
Bank Loans	0.5	1.3	2.8
Trade Debt	−2.4	0.5	4.1

* Instrument values do not add up to the total since some instruments are not included.

these tables will be contrasted to show the effect of the monetary cycle. The tables contain the average annual net rate of acquisition of assets and liabilities during D-E, U-E, and U-T quarters for the total sector and each instrument that it uses significantly.

Total asset and liability net flows of the Consumer sector (see Table 2) are larger on the average in upswing quarters than in downswing quarters. An analysis of the asset instruments shows that the upswing leads consumers to increase all forms of savings slightly, and to cease liquidating their holdings of Federal Government obligations.[20] This seems to be a normal reaction to increases in income. Concerning the major liability items, the same expected behavior is observed: consumer credit and 1-4 family mortgages rise in the upswing.

In the Corporate sector (Table 3) the most noteworthy finding is the failure of holdings of Other Financial Assets to decline in downswings while the total net acquisition of assets by the sector nearly falls to zero. The attractiveness of foreign investment (Other Financial Assets) seems to be unaffected by domestic downswings. Other items follow the expected pattern. Corporations' holdings of money and Federal obligations are drawn down and the amount of trade credit acquired is much less in downswings. Turning to the liabilities, even though the sector relies relatively twice as heavily in downswings on the issuance of bonds and stocks to raise funds, the value of the issues is approximately the same in either phase of the cycle. Also, corporations pay off their debt in downswings. During these times they are purchasing less on credit than they are paying out, since these payments are for the larger credit purchases made during the preceding upswing quarters.

The asset side of the Federal Government sector (Table 4) contains a somewhat surprising finding. The Treasury accumulates cash balances at the rate of $5.0 billion a year in U-E quarters. A possible rationale for this will be offered in the following section on the effects of

[20] The large flow of savings accounts at commercial banks in U-E quarters should be discounted as three of its eight quarters are after January 1, 1962, the day the maximum rate payable on savings deposits was increased. The average of the remaining five U-E quarters is only $4.8 billion.

Table 4

Federal Government
(Quarterly Average Flow at an Annual Rate in Billions of Dollars)*

	III(D-E)	IV(U-E)	I(U-T)
Total Assets	0.7	7.7	1.6
Demand Deposits and Currency	−0.2	5.0	−1.2
Mortgages	0.6	0.3	1.0
Other Loans	0.6	2.0	1.0
Total Liabilities	2.3	12.1	3.2
Consumer Saving Through Life Insurance and Retirement Funds	0.7	1.0	0.8
Short Term Direct Securities	−0.8	5.7	2.9
Other (Over One Year) Securities	1.5	5.0	−1.9

* Instrument values do not add up to the total since some instruments are not included.

the monetary cycle. On the liability side, the annual rate of increase in total Federal Government security issues is much greater ($10.7 billion versus $0.7 billion) in the early upswing quarters than in downswing quarters. This is, of course, partially explained by the expenditure and tax receipts patterns of the Federal Government (because of the lagged tax receipts and the short duration of postwar recessions, the largest deficits normally occur in the early upswing quarters), but it also reflects the large accumulation of cash balances noted above.

The Commercial Banking sector (Table 5) doubles its net acquisition of assets in upswings as compared to downswings and also doubles its holdings of State and Local Government issues (they constitute 15.5 percent of the total acquisition in both D-E and U-E quarters and 13.5 percent in U-T quarters). It may be that this reflects an effort by banks to keep their portfolios balanced in terms of risk over the cycle. Also in the upswing, the sector greatly increases its net acquisition of mortgages and extends bank loans (primarily industrial and agricultural) rather than liquidating them as it does in downswings. The average rate of acquisition of the other asset instruments is approximately constant. The total liabilities of banks are also about twice as large in upswings as in downswings. The main item contributing to this result is net demand deposits and currency due to the U. S. Government, which is quite large in upswings, rather than negative as it is in downswings. This is consistent with the previously observed timing of the Treasury's financing activities.

In the early stages of the upswing, the Non-Bank Finance sector (Table 6) increases its rate of acquisition of 1-4 family mortgages and decreases that of corporate and foreign bonds. This portfolio adjustment probably reflects an increased demand for mortgages. Also, the greater propensity to invest in corporate and foreign bonds in a domestic downswing might result from a movement into foreign bonds. No liability items change significantly over the cycle.[21]

B. Effect of the Monetary Cycle

To study the effect of the monetary

[21] Since the Non-Bank Finance sector is well noted for its secular growth (giving an upward bias to classification IV), we do not interpret slightly larger values for IV over III or I as significant.

Table 5

**Commercial Banking and Monetary Authority*
(Quarterly Average Flow at an Annual Rate in Billions of Dollars)†**

	III(D-E)	IV(U-E)	I(U-T)
Total Assets	9.6	20.8	5.2
Short Term Direct Federal Securities	2.5	3.2	−0.6
Other (Over One Year) Federal Securities	3.2	4.0	−3.4
State and Local Government	1.5	3.2	0.7
Mortgages	0.9	2.6	1.9
Consumer Credit	0.8	0.8	1.9
Bank Loans (N.E.C.)	−0.9	3.2	5.6
Total Liabilities	8.7	19.8	4.3
Net Demand Deposits Due to U. S. Government	−0.1	4.9	−1.2
Net Demand Deposits Due to Others	1.8	3.3	2.4
Net Time Deposits Due to Consumers	3.7	7.7‡	3.3

* Since the transactions of the Monetary Authority in Federal Government securities have been excluded, the data contained in this table pertain only to the Commercial Banking System.

† Instrument values do not add up to the total since some instruments are not included.

‡ See note 20.

cycle we contrast classifications I(U-T) and IV(U-E) which appear in columns 2 and 3 in Tables 2-6.[22] When contrasting the flows over the business upswing part of the monetary cycle, tight money implies a relatively higher average interest rate than easy money, as well as a rising rate. This is because the falling rate of easy money is not included in the average until it has reached a low level (where the upswing begins), while the entire span of the rising rate is included in the average.[23] Hence the effect of the monetary cycle can often be interpreted as a response to higher or lower interest yields or costs. In this sub-section our findings are compared with those of Weiler whenever possible. Weiler classified the six quarters from the beginning 1952 through mid-1953, and the six quarters from mid-1956 through the end of 1957 as tight money periods.

Looking at the asset side of the Consumer sector (Table 2), savings accounts at savings institutions and at commercial banks increase less when money is tight. This is because interest rates on savings accounts do not vary over the monetary cycle, while other rates of return do. Answering Weiler's question (stated in note 4 above), increases in time deposits, sav-

[22] Throughout the analysis we are assuming that each of the three business cycles since 1952 has been homogeneous on the upswing (the effect of the upswing on the flows has been the same during the entire upswing). This assumption is necessary for our monetary cycle conclusions to be valid. Since easy money exists in the early stages of the upswing and tight money in the late stages, if there is a systematic change in the effect of the upswing as it takes its course, then what we attribute to changes in monetary conditions might actually be attributable to the changing effect of the upswing. (In our monetary cycle analysis, we do occasionally attribute a difference in flows to non-monetary causes.)

[23] For our particular period the average Treasury bill rate was 2.52% in U-T quarters and only 2.05% in U-E quarters. The effective differential was more than 0.47% because the rate in U-E quarters is biased upward due to the upward trend in the bill rate since 1951 and the concentration of U-E quarters in the later years of the period. See note 19 and Appendix C.

Table 6

Non-Bank Finance
(Quarterly Average Flow at an Annual Rate in Billions of Dollars)*

	III(D-E)	IV(U-E)	I(U-T)
Total Assets	20.7	25.7	21.0
Corporate and Foreign Bonds	4.3	3.5	3.8
Corporate Stock	2.2	3.1	1.4
1-4 Family Mortgages	7.6	10.3	8.6
Other Mortgages	2.2	3.0	2.1
Total Liabilities	18.2	23.9	19.7
Savings Shares	6.2	7.9	5.9
Saving Through Life Insurance	3.1	3.9	3.5
Saving Through Pension Funds	3.9	4.1	4.0

* Instrument values do not add up to the total since some instruments are not included.

ings deposits, and savings shares during a prosperity and tight money period do not appear to be a result of tight money as he suspected. An asset which is more attractive during tight money is Federal obligations. Yields are rising as banks are willing to sell their holdings at low prices. On the liability side consumer credit increases in tight money since income is at its peak.

The Corporate sector's increase in assets (Table 3) shows the somewhat strange phenomenon of corporations purchasing Federal Government securities when money is tight. When money is still easy, firms sell their holdings of securities (low interest rate, high prices) so that when money becomes tight, firms that need funds no longer have securities to liquidate. Firms with excess funds (the internal source of funds is more than adequate in some cases), however, purchase securities (high interest rate, low prices). In the aggregate firms acquire securities even though, individually, many firms need funds. On the liability side, long term sources of funds—corporate issues and mortgages—are relatively constant over the monetary cycle, but short term sources—bank loans and trade debt—are more fully exploited when money is tight.

When discussing the Corporate sector, Weiler says:

> During the two tight-money periods, corporate businesses appeared to finance their needs by (1) selling federal government obligations and (2) issuing their own long-term obligations—primarily bonds and other securities.[24]

Weiler is incorrect on the first count, but may be correct on the second if trend compensations are made. Nevertheless, short term sources are more important than long term sources for supplying extra funds during tight money. The principle is that, *ceteris paribus*, if one has to borrow at high interest rates, short term debt is preferred to long term debt.

When money is tight, the Federal Government sector (Table 4) acquires few assets, but the value of mortgages acquired increases on the average, as government agencies occasionally attempt to prevent mortgage rates from rising. Also, the cash balances which are built up in the early stages of the upswing (at the annual rate of $5.0 billion) are slowly drawn down in tight money. This appears to be a corollary to the much larger issue

[24] Weiler, *The Flow of Funds, op. cit.*, p. 245.

of securities in U-E quarters compared to that in U-T quarters. Also, the debt is considerably shortened in tight money as long-term securities are retired on net.[25] Both the amount and the form of the issue during the different periods seem to reflect a policy of minimizing the interest burden of the debt.

As was noted when we classified tight and easy quarters, the Commercial Banking sector (Table 5) reduces its holdings of Federal obligations when money is tight to obtain loanable funds. The rate of acquisition of State and local government issues also falls during tight money, while that of bank loans and consumer credit increases (the latter from $0.8 billion to $1.9 billion at annual rates). The consumer credit finding conflicts with Weiler who says:

> . . . the amounts advanced in short-term credit to consumers did not decline [in tight money periods] as much as one would have expected. . . .[26]

The rate of increase in total liabilities is also much lower when money is tight than when money is easy. This obviously reflects the fact that the Treasury is drawing down cash balances rather than accumulating them. It might also reflect monetary restraint as both time and demand deposits increase at slightly lower rates.

Our final sector, Non-Bank Finance (Table 6), substitutes corporate and foreign bonds for corporate stock in tight money when interest rates are high and reverses itself in easy money. The rate of acquisition of bonds rises as a proportion of the rate of acquisition of total assets from 14 percent in U-E quarters to 18 percent in U-T quarters, while that of stock falls from 12 percent to 7 percent. No other changes in the flows on the asset or liability sides are interpreted as significant (see note 21).

C. Effects of the Cycles on Inter-Sectoral Flows

In this sub-section we restate some previous findings and investigate new relationships by summing various forms of security issues across sectors. This procedure also enables us to compare our findings with those of Gurley. The percentage that each form of issue is of the total issue of primary securities has been computed in Table 7 for the latter purpose.

Referring to Table 7, the main conclusion of the Federal Government sector is repeated. The Treasury issues most securities in U-E quarters, partly because deficits are greater and partly to avoid issuing securities when interest rates are higher. The rate at which State and local government bonds and mortgages are issued is fairly constant throughout the classifications, particularly if an upward bias of U-E quarters due to trend is considered. The same is true for corporate stocks and bonds. The short term issues—consumer debt, bank loans, and trade debt—are repaid in downswings and are issued in particularly large amounts in tight money.

Gurley studied the flows between sectors by dividing the period 1947-58 into recovery years (1947, 1950, 1955), prosperity years (1948, 1951-53, 1956, 1957) and recession years (1949, 1954, 1958). Hence his results are compared with our business cycle findings. Note that recessions is the same as downswing, while recovery and prosperity refer to different stages of the upswing. Quoting Gurley:

> Net issues of Federal Government securities, as a share of total net issues, typically rose from recovery to prosperity to recession years. To a lesser extent, this pattern was followed by State and local government

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[25] At times, the 4¼% interest rate ceiling has restricted issues of securities with maturities over five years, but since "other" in the flow of funds data refers to issues with maturities as short as one year, this can be ignored.

[26] Weiler, *The Flow of Funds, op. cit.*, p. 250.

Table 7

Primary Issues in Different Periods
(Average Annual Rate in Billions of Dollars)

	III(D-E)		IV(U-E)		I(U-T)	
	$	%	$	%	$	%
Federal Government Issues*	0.7	3	10.7	24	1.0	2
State and Local Government Issues and Mortgages†	14.9	74	20.5	47	16.3	43
Corporate Stocks and Bonds‡	6.1	32	6.3	14	5.9	16
Consumer Debt, Trade Debt, and Bank Loans§	— 1.7	— 9	6.7	15	14.5	39
TOTALS	20.0	100	44.2	100	37.7	100

Sources: * Table 4.
† Tables 5, 6, and Appendix A, Table A-2.
‡ Table 3.
§ Tables 2, 3, and 5.

securities and mortgages. Corporate bonds and stocks tended to gain in relative importance from recovery to prosperity years, but then lost some ground in the recession years, though not much. As a group, then, these securities rose in relative importance during the course of the short cycle.

Consumer debt, bank loans, and trade debt all behaved similarly, but in the opposite way to the first group. These securities fell as a percentage of total net issues as each short cycle progressed. Combined increases in these three components made up about 50 percent of total net issues in recovery years, around 30 percent in prosperity years, and only a little more than 10 percent in recession years. The first group of securities —Government securities, corporate issues, and mortgages—obviously displayed opposite movements, rising from 50 percent in recovery to 70 percent in prosperity and to 90 percent in recession years.[27]

The differences in the sets of findings are striking.[28] Gurley found that Treasury issues are a much greater share of the total issue in downswings, while we found them to be relatively eight times greater in the upswing. Also, he found that short term issues constitute a generally greater share of the total issue than we do. In particular he did not find them being repaid on net in downswings. Finally, Gurley says that corporate issues are only a slightly greater share of the total issue in downswings, while we find them to be more than twice as large a percentage of the total in downswings as in upswings. His neglect of the monetary cycle and the use of crude yearly data appear to have led Gurley astray.

However, our tight versus easy money findings are quite similar to Gurley's recovery-prosperity versus recession results. Federal Government issues are much higher in easy money, the long term issues are slightly higher in easy money, and the short term issues are lower. Combining the forms of issue further, Gurley found that Government securities, corporate issues, and mortgages constitute 90 percent of the issues in downswings and

[27] Gurley, "Liquidity and Financial Institutions," *op. cit.*, p. 34.

[28] The difference might simply be a result of studying different time periods. Our analysis is incapable of detecting any changes in the behavior of the sectors over time. Implicitly we have assumed no changes between 1952 and 1962 (as Gurley implicitly assumed none between 1947 and 1958). However, we think it unlikely that very substantial alternations of behavior have occurred since 1958.

63 percent in upswings, with short term debt comprising the remainder.[29] Summing our results in the same manner yields 85 and 61 percent in easy and tight money, respectively. Gurley seems to have captured the effect of the monetary cycle while attributing it to the business cycle.

IV. *Applications*

Our results can be used to test the validity of the Gurley-Shaw thesis that financial intermediaries need to be directly controlled by the monetary authority.[30] The thesis is based on the following two premises: (1) non-bank financial institutions increase their rate of acquisition of assets and liabilities in the business upswing, thereby intensifying the upswing and increasing the threat of inflation;[31] and (2) the efforts of the monetary authorities, as reflected in tightening monetary conditions, do not have a restraining influence on these non-bank financial institutions. Referring again to the asset side of the Consumer sector (Table 2), it is seen that non-bank financial institutions do increase their activities in the upswing: savings accounts at non-bank savings institutions increase from an annual rate of $8.1 billion in D-E quarters to $10.3 billion in U-E quarters. Adding saving through life insurance and pension funds to the savings accounts does not affect the validity of the premise as the rate of acquisition still increases from $17.3 billion in D-E quarters to $21.5 billion in U-E quarters. The second premise, however, is clearly not correct—tight money does restrain the activities of non-bank financial institutions quite noticeably. The rate of increase of savings accounts at non-bank savings institutions falls from $10.3 billion in U-E quarters to $7.6 billion in U-T quarters, and the rate of increase of the three forms of savings combined falls from $21.5 billion in U-E quarters to $16.5 billion in U-T quarters.[32]

Lastly, we use our findings to test whether the Treasury's debt management

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[29] The number 63 is obtained by averaging 50 and 70, weighing the latter twice as heavily as the former because of the greater frequency of prosperity years.

[30] The quarterly data also challenge another argument for greater control of non-bank savings institutions which is sometimes espoused by conservative bankers. This is the argument that the non-bank institutions, being much less liquid than commercial banks, are unsafe. This argument fails to recognize that the liquidity needs of non-bank savings institutions are considerably less than those of commercial banks. The increase in savings accounts at non-bank savings institutions was never less than a billion dollars a quarter (quarterly rate) from 1952-57, and it was never less than two billion dollars from 1958-62. In contrast, the sum of savings accounts and demand deposits and currency at commercial banks actually fell in six quarters, once by nearly two billion dollars. Of course, an analysis of random samples of individual commercial banks and non-bank savings institutions would be more meaningful than simply looking at aggregate net increases in liabilities. However, if we assume that the variance of the underlying distribution (of total net increases in liabilities among individual members) of non-bank savings institutions is not greater than the comparable variance of commercial banks, then the above data do establish the much greater liquidity needs of commercial banks. (For an analysis of instability of deposits at individual commercial banks, see Lyle E. Gramley, *Essays on Commercial Banking*, Federal Reserve Bank of Kansas City, 1962, pp. 41-53.)

[31] That non-bank financial intermediaries increase their activities in the upswing does not necessarily imply that inflationary pressures are increased. While investment undoubtedly increases due to an outward shift in the saving schedule, the increase may be less than an accompanying fall in consumption. For a complete theoretical discussion of the issue, see George Horwich, "Financial Intermediaries, Saving, and the Price Level," Institute Paper No. 34, December 1962, Institute for Quantitative Research in Economics and Management, Purdue University.

[32] Appendix C shows that removing the trend does not alter the direction of any changes in the rates of acquisition.

policies are contra-cyclical. When analyzing the effect of the busines cycle, we found that the Treasury issues securities primarily in the early stages of the upswing, when deficits are the largest. However, nearly half of these issues are used to build up cash balances which are drawn down in U-T quarters. The Treasury thereby avoids issuing large quantities of securities when interest rates are high and hence it tends to minimize the interest burden of the debt.[33] But, if tight money is associated with inflationary pressures, drawing down idle cash balances in tight money may conflict with Federal Reserve policy. Further, building up cash balances in the early stages of the upswing might well undermine the upswing. Both the Federal Reserve and the Treasury should be well aware that minimizing the interest burden of the debt conflicts with contra-cyclical policy.

[33] Cash balances are accumulated in all eight U-E quarters. In general, the data for the last five U-E quarters (1961-62) do not differ greatly from the data for the first three U-E quarters (1952-58).

Appendix A

The final data used in the selection of the "important" sectors and financial and credit market instruments are given in Tables A-1 and A-2, respectively.

Table A-1

Sector	A1 Amount ($ bil.)	A2 Percent (%)	A3 Range ($ bil.)	L1 Amount ($ bil.)	L2 Percent (%)	L3 Range ($ bil.)
Consumer and Non-Profit Corporate Non-Financial Business	28.2	37.4	25.3	15.1	20.8	13.2
Corporate Non-Financial Business	7.7	10.2	23.7	12.9	17.7	19.9
Federal Government	2.6	3.5	23.2	4.5	6.2	28.8
State and Local Government	3.2	4.2	5.9	6.1	8.4	6.4
Commercial Banking and Monetary Authorities	8.9	11.8	29.4	7.9	10.9	29.9
Non-Bank Finance	21.9	29.0	18.8	19.7	27.2	17.9
Farm Business	−0.1	. . .	0.7	0.4	0.6	6.1
Non-Corporate Non-Financial Business	0.5	0.7	1.6	2.5	3.4	12.1
Rest of the World	2.5	3.3	8.6	3.1	4.3	7.4

The first six sectors were selected as "important"; the other three were excluded.

IDENTIFICATION OF COLUMNS:

A1—quarterly average ($ billions) of sector net acquisition of assets.

A2—percentage of sector quarterly average of net acquisition of assets to total quarterly average of net acquisition of assets (sector figure from column A1 over $75.4 billion). The sum of this column may not add to 100% due to rounding.

A3—range of quarterly flows (average of highest three quarters minus the average of the lowest three quarters) of sector net acquisition of assets.

L1, L2, and L3 are identified similarly substituting "net increase of liabilities" for "net acquisition of assets."

Table A-2

Instruments	Assets 1(%)	Assets 2($ bil.)	Instruments	Liabilities 3(%)	Liabilities 4($ bil.)
CONSUMER AND NON-PROFIT CORPORATE NON-FINANCIAL BUSINESS					
Savings Accounts at Commercial Banks	14.5	10.6	1-4 Family Mortgages	68.4	8.3
Savings Accounts at Savings Institutions	28.3	7.8	Consumer Credit	23.0	8.0
Saving Through Life Insurance	12.4	2.2			
Saving Through Pension Funds	22.6	4.8			
Federal Obligations	0.4	14.7			
Demand Deposits and Currency	3.5	7.9	Other Loans	2.4	0.6
State and Local Obligations	4.6	4.7	Security Credit	2.4	3.4
Corporate and Foreign Bonds	2.5	5.5	Total Instruments of Non-Profit Organizations	3.1	1.0
Corporate Stock	3.5	5.2			
Mortgages	5.6	2.6			
Net Investment in Non-Corporate Business	0.4	5.2			
CORPORATE NON-FINANCIAL BUSINESS					
Demand Deposits and Currency	1.8	10.3	Corporate Bonds	32.2	5.5
Federal Obligations	−1.7	13.5	Corporate Stocks	15.9	3.5
Trade Credit	60.8	16.1	Mortgages	19.4	3.9
Other Financial Assets (Direct investment abroad and foreign currency holdings)	20.3	2.5	Bank Loans (not elsewhere classified)	14.3	10.8
			Trade Debt	14.4	17.9
Time Deposits	5.6	5.4	Other Loans	3.5	2.7
Consumer Credit	6.1	1.7			
Finance Paper (other)	3.1	3.2			
FEDERAL GOVERNMENT					
Demand Deposits and Currency	12.4	22.6	Consumer Saving Through Life Insurance and Retirement Funds	18.2	2.0
Mortgages	30.3	2.8	Short Term Direct Obligations	61.7	43.6
Other Loans	39.7	5.0	Other Securities	15.5	51.0
Other Financial Assets	17.5	4.3	Savings Bonds	− 9.3	3.4
			Other Loans	0.8	6.2
			Other Liabilities	12.9	5.3
STATE AND LOCAL GOVERNMENT					
Demand Deposits and Currency	12.0	5.2	Consumer Saving Through Retirement Funds	25.1	1.7
Time Deposits	12.2	3.0	Short Term	2.8	1.9
State and Local			Other Liabilities	4.1	1.2
Federal Obligations	30.3	4.0	Other (long term)	67.9	3.2
Obligations	10.9	0.3			
Other (mainly corporate bonds and mortgages)	34.5	1.7			

Table A-2 (Cont.)

Instruments	Assets 1(%)	Assets 2($ bil.)	Instruments	Liabilities 3(%)	Liabilities 4($ bil.)
COMMERCIAL BANKS AND MONETARY AUTHORITIES					
Short Term Federal Obligations	8.8	32.7	Demand Deposits and Currency Due to U. S. Government	3.8	26.5
Other Federal Obligations	– 2.7	35.6	Demand Deposits and Currency Due to Others	27.7	14.1
State and Local Government	14.7	5.6	Time Deposits Due to Consumers	51.7	13.2
Mortgages	19.1	4.1			
Consumer Credit	15.4	4.2			
Bank Loans	37.5	12.6			
Gold	– 6.6	5.3	Demand Deposits and Currency Due to Rest of World	1.0	2.5
Monetary Authorities	7.0	7.2			
Corporate and Foreign Bonds	– 1.1	0.7	Time Deposits Due to Others	12.8	9.0
Other Loans	3.0	5.7	Other Liabilities	2.3	1.6
Security Loans	5.0	7.1			
NON-BANK FINANCE					
Corporate and Foreign Bonds	17.8	4.8	Savings Shares	31.5	6.8
Corporate Stock	10.7	5.1	Saving Through Life Insurance	17.4	2.4
1-4 Family Mortgages	39.0	8.4	Saving Through Pension Funds	20.2	3.4
Other Mortgages	9.8	3.0			
Demand Deposits and Currency	2.2	2.1	Deposits in Mutual Savings Banks	9.5	2.2
Federal Obligations	0.1	5.3	Corporate Bonds	4.2	2.2
Consumer Credit	7.2	4.4	Corporate Stock	5.9	2.3
Other Loans	5.2	3.8	Bank Loans	1.7	6.0
Security Credit	1.4	4.6	Open Market Paper	1.7	2.1
Other Financial Assets	1.6	1.6	FHLB Loans to Savings and Loan Associations	1.1	2.0
			Security Credit	1.6	6.4
			Miscellaneous	5.3	2.3

Identification of columns for Table A-2:

1—Percentage of the sector quarterly average (annual rate) of net acquisition of assets accounted for by the quarterly average (annual rate) of the net flow of the financial instrument. Negative indicates that the net quarterly average flow of the financial instrument was in the opposite direction from the sector net acquisition of assets. Columns may not add to 100% due to rounding.

2—Range of quarterly flows (annual rate) of the financial instrument. This is the average of the three highest quarters minus the average of the three lowest quarters.

3—Percentage of the sector quarterly average (annual rate) of net increase of liabilities accounted for by the quarterly average (annual rate) of the net flow of the financial instrument. The same remarks as in explanation of column 1 above apply here.

4—Range of quarterly flows of the financial instruments (calculated as described in explanation of column 2 above).

Appendix B

Appendix B, containing Tables B-1 and B-2, contains the underlying data for Table 1 in the text which is the classification of quarters into the four categories: I, II, III, and IV. Table B-1 shows how the quarters are classified as either tight or easy money. Table B-2 contains the National Bureau's reference dates which are used to classify the quarters as either upswing or downswing.

Table B-1

	1952				1953				1954				1955				1956				1957				1958				1959				1960				1961				1962			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
R	T	T	T	T	T	T	T	T	E	E	E	E	E	T	T	T	T	T	T	T	T	T	T	E	E	E	E	T	T	T	T	T	T	E	E	E	E	E	E	E	E	E
B	E	E	T	T	T	T	E	T	E	E	E	E	T	T	T	T	T	T	T	E	E	T	E	T	E	E	T	E	T	T	T	T	T	T	E	E	E	E	E	T	E	T	E
N	E	E	T	T	T	E	E	E	E	E	E	E	E	T	T	T	T	T	T	T	T	T	T	T	E	E	E	T	T	T	T	T	T	T	E	E	E	E	E	E	E	E	E
r	E	T	T	T	T	T	E	E	E	E	E	T	T	T	T	T	T	T	T	T	T	T	T	E	E	E	T	T	T	T	T	T	E	E	E	E	E	E	T	T	T	T
M	E	T	T	T	T	T	E	E	E	E	E	E	T	T	T	T	T	T	T	T	T	T	T	E	E	E	T	T	T	T	T	T	E	E	E	E	E	E	E	T	E	E

R is the rediscount rate at the New York Federal Reserve Bank. If the rate is or has been falling most recently, money is easy.

B is purchases of government securities by the banking system. When purchases are positive, money is easy.

N is net free reserves (borrowings from Federal Reserve Banks—excess reserves). Positive net free reserves indicate easy money.

r is the Treasury bill rate. A falling rate indicates easy money.

M is the final classification as to monetary conditions.

T occurs when the indicator says money is tight.

E occurs when the indicator says money is easy.

Sources: R, r, and N are taken from various issues of the **Federal Reserve Bulletin.**
B is taken from "Flow of Funds Seasonally Adjusted," Federal Reserve Supplement, 1963, and issues of the **Federal Reserve Bulletin.**

Table B-2

Upswing	Downswing
10, '40—7, '53	8, '53—8, '54
9, '54—7, '57	8, '57—4, '58
5, '58—5, '60	6, '60—2, '61
3, '61	

Source: **Business Cycle Developments,** U. S. Department of Commerce, April 1963, p. 6.

Appendix C

Since this study deals with 54 economic time series over a ten year period, the question of trends arises. As a first approximation to this problem it is assumed that a least-squares regression line would closely represent the trend in each case. Due to the non-symmetric classification of quarters into the four groups, a trend will affect the size of the differences between these groups. Particularly, since five of the eight quarters in group IV are from 1961 and 1962, the data may display a difference between groups simply because a trend exists without any assistance from the business or monetary cycle.

In examining this problem, we find that less than a third of the instrument or sector time series used contain a significant trend. Moreover, the effect of the trend on the differences between averages of the groups for any particular instrument or sector is usually less than 10%.

To consider the problem in detail, order the 44 quarters in time, transforming

1st quarter, 1952 into 0,
2nd quarter, 1952 into 1,
3rd quarter, 1952 into 2,
•
•
•
4th quarter, 1962 into 43.

Thus, the average of these quarters is 21.5 or mid-1957. Now group the quarters into their respective groups I, III, and IV. Using their corresponding numbers, we find the time-wise average of the quarters in these groups to be 19.33, 20.45, and 29.37, respectively. Groups I and III contain slightly more quarters from the first half of the period while group IV is more heavily weighted toward quarters from the later years. (Refer again to Table 1 for the classification of the quarters.)

Now suppose some financial instrument had a linear trend expressed by the regression equation $Y = 2.0 + 1.0t$ where Y is the net quarterly flow (at an annual rate) of the instrument in billions of dollars and t is time. Aside from any effects of the business or monetary fluctuations, the quarterly average for this instrument would appear different among the three groups.

	III(D-E)	IV(U-E)	I(U-T)
Imaginary instrument average ($ bil.)	22.45	31.37	21.33

Consequently, in our interpretations of such data, the higher flow in group IV as compared to either group I or group III should not be attributed to either the monetary or business cycle. When such an upward trend exists and group IV is comparatively higher, the actual difference would be less than the data reveal. Oppositely, if group IV is comparatively lower, the actual difference would be greater than shown. In the case of a downward trend, the arguments would be reversed.

It is fortunate that no instrument has as large a trend as in the hypothetical example where the quarterly slope was $1.0 billion. Indeed, no instrument is close to having a *yearly* slope this large. The largest trend was found in Savings Accounts at Savings Institutions. The regression equation is $Y = 4.43 + 0.174\,t$. For this instrument, the trend only would show the following differences in our group averages.

	III(D-E)	IV(U-E)	I(U-T)
Savings Accounts at Savings Institutions	7.99	9.54	7.80

Note that the greatest difference is about 1.7 between groups IV and I. A peculiarity of the quarterly ordering now becomes evident. Recall that the time-wise averages of quarters in groups IV and I are 29.37 and 19.33, respectively. This difference of 10 units will always be the multiplier of the re-

gression slope coefficient in determining the effect of the linear trend. In the hypothetical example the slope was 1.0 and the resulting difference between groups IV and I was about $10 billion. Just above, the slope was 0.174 and the resulting difference was $1.7 billion. Similarly, the difference between groups III and IV is comparable, but smaller in each case as the multiplier works out to be about 9 instead of 10.

Using this rule of thumb, it is easy for the reader to adjust the data (if he desires to remove linear trend effects) once he realizes the approximate magnitude of the slope of the least-squares regression lines. It turns out that those instruments which one would guess to have an upward trend, a downward trend, or no trend over this period do correspond to these intuitions. Consider the following regression equations:

Savings Accounts at Commercial Banks	$Y = 1.00 + 0.151\,t$
Saving Through Life Insurance	$Y = 2.93 + 0.028\,t$
Demand Deposits at Commercial Banks	$Y = 2.55 - 0.004\,t.$

In dealing with our data on these instruments, one could effectively remove the trend by reducing the difference between groups IV and I by $1.5, $0.3, and $0.0 billions, respectively. The corrections to be made when comparing groups III and IV would be 9/10 as large.

Such corrections were not made throughout this paper as we felt happier dealing with the actual flow of funds data so that the reader can easily follow the procedures without involving himself in trend corrections. Moreover, only a relatively small number of the instruments have a regression slope as large as 0.1, and over two-thirds have one smaller than 0.05. In most cases the adjustment would be $0.1-0.5 billion. We feel that the actual amount which such a change would affect the differences between groups is too small a percentage to warrant confusion through the entire paper.

Next, we examine the amount of the percentage error due to the existence of trends. (Our rule of thumb above presents a good approximation to the absolute magnitude of the error.) Suppose we represent the values in billions of dollars from some instrument as N_{III}, N_{IV}, and N_I, before removing the trend. The numbers after removal of the trend will be

$$M_{III} = N_{III} - b(20.45),$$
$$M_{IV} = N_{IV} - b(29.37), \text{ and}$$
$$M_I = N_I - b(19.33) \text{ where b}$$

is the regression coefficient or slope of the trend line. The largest error due to the trend will occur when comparing groups IV and I. The original percentage difference would be $(N_{IV} - N_I)/N_{IV}$ compared to $(M_{IV} - M_I)/M_{IV}$ after removal of the trend. The remainder between these two expressions represents our percentage error due to trend. The percentage error =

$$\frac{b(29.37\,N_I - 19.38\,N_{IV})}{N_{IV}^2 - 29.37\,b\,N_{IV}}$$

Using this formula, consider the instrument, Savings Accounts at Savings Institutions, for which the largest b value (0.174) was found. By substitution we find that the percentage error between the differences of groups IV and I using original and trend adjusted data is 7.7%. Whenever b is quite large, the dollar values are necessarily large too so that this percentage is not exceptionally small. If b is quite small, the percentage error will be small also. As an example, for Demand Deposits at Commercial Banks, $b = 0.004$ and the error is 0.1%.

In conclusion we realize that our results may not be as conclusive as we would like because of the trend problem. Nevertheless the more important results evolve from quite sizable differences. In these cases, the purported difference would still be significant after trend consideration. Other interesting results concern the Federal Government and Commercial Banking sectors where only a negligible trend is evident for most of the instruments. More important than all this, the existence of trends in no degree lessens the power of the methodology which allowed a most reasonable classification of the quarters and a serious probing into the flow of funds anatomy.

► EDWARD C. ETTIN and WILLIAM P. YOHE

Reserve Requirement Control of Financial Intermediaries

Since J. G. Gurley and E. S. Shaw advanced the proposition that commercial banks are more like financial intermediaries than most economists have traditionally believed,[1] there has once again been much discussion of the topic of financial intermediaries. While the profession seems to be growing tired of chewing on this now almost meatless bone, we would like to attempt to illuminate one basic, *mechanical* error that seems to have crept into some of the literature. This paper, therefore, first deals with the elementary nature of bank and non-bank financial multipliers (multiple expansion and contraction) and then suggests that legal reserve requirements might advantageously be imposed on non-bank financial intermediaries (NBFI's) for reasons quite different from those usually put forward.[2]

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[1] J. G. Gurley and E. S. Shaw, "Financial Aspects of Economic Development," *American Economic Review*, 45, September 1955, pp. 515-538.

[2] For a much more comprehensive discussion of the nature of financial multipliers, see J. M. Henderson, "Monetary Reserves and Credit Growth," *American Economic Review*, 50, June 1960, pp. 348-369; D. Shelby, "Some Implications of the Growth of Financial Intermediaries," *Journal of Finance*, 13, December 1958, pp. 527-541; W. P. Yohe, "The Derivation of Certain Financial Multipliers," *Southern Economic Journal*, 29, July 1962, pp. 26-32; and W. L. Smith, "Financial Intermediaries and Monetary Controls," *Quarterly Journal of Economics*, 73, November 1959, pp. 533-538.

It has been suggested (not by Gurley and Shaw) that if NBFI's were subject to a legal reserve requirement at a central bank, then "this would permit a multiple impact on the total supply of intermediary credit through changes in reserve requirements . . ."[3] Such an attempt to make the NBFI system exactly like the commercial banking (CB) system from a credit and deposit creation point of view rests on a basic fallacy. It ignores the fact that, under present institutional and behavioral relationships that follow from the nature of CB and NBFI claims, the reserve leakage from the CB system is very small, while the reserve leakage from the NBFI system is very large.[4] This fallacy seems to us to be due to a misinterpretation of the similarity between *ex post* observations of the two systems, which leads to the mistaken notion that the NBFI system can be made to function like the CB system.

I. *Commercial Bank Multiple Expansion*

The CB *system* with excess reserves, as is well known, may create deposits by a multiple of its reserves through its asset purchases (i.e., its extension of credit), even though each individual CB in the system is realistically assumed to lend only an amount equal to its excess reserves.[5] This process is possible only because (abstracting from cash drain and assuming legal reserve ratios remain unchanged) the deposit creation of individual CB's does *not* subject the system of banks to a reserve loss. The "created" deposits are not destroyed by transfer between banks as long as they (and, hence, reserves) stay within the system.[6] Cash drains, uncertainty about adverse clearings, etc., can reduce the resultant multiple creation of credit and deposits in the system but not eliminate it.[7]

Observe, that it *looks* as if each *individual* bank has experienced a multiple

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[3] M. E. Rozen, "Credit Controls and Financial Intermediaries: Comment," *American Economic Review*, 52, March 1962, p. 189. This article was a comment on D. A. Alhadeff's article, "Credit Controls and Financial Intermediaries," *American Economic Review*, 50, September 1960, pp. 655-671. The latter disputes this claim of Rozen's but on grounds different from those of the present authors. See his "Credit Controls and Financial Intermediaries: Reply," *American Economic Review*, 52, March 1962, pp. 197-198.

[4] Rozen, in the above quotation, speaks of "credit," while we shall speak of "deposits" and "credit," but his implication is that the words are synonymous. However, it should be borne in mind that the words are not always synonymous for CB's and never for NBFI's. See below.

[5] Everywhere we discuss an individual CB we are referring to an "average" member of an atomistic CB system.

[6] Of course, if there is no demand for the money so created, the CB system will observe deposit contraction (probably through loan repayments) and the return of excess reserves. The central bank, therefore, would probably remove the excess reserves, in order to have a better control over the system. The mechanics of the above discussion, however, remain the same.

We might add here that, in our view, probably the main impact of NBFI's on the CB system is to reduce the demand for bank deposits (and increase the interest elasticity of liquidity preference proper) by presenting liquid asset holders with more varied liquid claims to hold (which, as a result, increases the marginal rate of substitution of NBFI claims for money). Thus, part of the reserve base of the CB system will be absorbed by NBFI's deposits at CB's (which are the reserves of NBFI's), and less reserves will have to be supplied by the central bank in order to support the lower level of the money stock demanded by the non-financial sector (i.e., lower than would be the case if NBFI's did not exist).

[7] See D. Orr and W. J. Mellon, "Stochastic Reserve Losses and Bank Credit," *American Economic Review*, 51, September 1961, pp. 614-623; H. J. Miller, Jr., "Comment," *American Economic Review*, 52, December 1962, pp. 1118-1120, and "Reply," *ibid*, pp. 1120-1122.

expansion of deposits because, *ex post* (i.e., after the derivative deposits have left the individual bank), reserves are only a fraction of deposits. This tautological multiple expansion, however, simply results from the fact that derivative deposits and excess reserves have been lost to the individual bank. *For the individual bank, reserves have been reduced to a fraction of deposits—not deposits expanded by a multiple of reserves.* Only the *system* truly created deposits and credit as a multiple of its reserves by the act of each *individual* bank's creating deposits equal to excess reserves. This procedure was possible only because reserves stayed within the system of banks. The tautological multiple "expansion" is the root of much misunderstanding about the nature of NBFI's.

II. *Non-Bank Financial Intermediary "Multiple Expansion"*

An NBFI does not "create" a deposit in the same way that a bank does, i.e., in making a loan or buying an investment. Its deposits are "created" only when someone brings *money* to it and exchanges that money for a claim on the intermediary.[8] NBFI's do not, as CB's do, lend by setting up new deposits; they lend by transferring to others claims on CB's (money) which they first had to wring from the public. The wringing consists of persuading the public to surrender to NBFI's deposits in CB's in exchange for "deposits" in NBFI's. Thus, the initiative lies with the public. Indeed, it appears that the NBFI's are mainly concerned with getting hold of money to lend. One of their major differences from banks, therefore, is that for NBFI's there is a complete separation between the "creation" of the claim (which must come first) and the granting of credit (i.e., an asset purchase by the NBFI other than the purchase of money); for CB's the credit and the "creation" of the claim are simultaneous and mirror images.[9] Clearly, NBFI's *could* lend by exchanging the asset "loan" for their liability "shares" or "deposits," but the borrower would, almost inevitably, immediately convert such a claim to money (i.e., "cash in" the claim at the NBFI) in order to spend it. Claims on NBFI's are not directly spendable, and surely very few people borrow from NBFI's in order to build up a stock of liquid assets in the form of claims on NBFI's.

More to the point, however, it is highly improbable that when NBFI's lend money (which are "reserves" kept as demand deposits in CB's)[10] that it will be redeposited immediately in the institution which made the loan or in any other NBFI. The *money* borrowed from the NBFI is borrowed to be spent and, once injected into the spending stream, it can only be attracted back to the NBFI when it comes into the possession of a holder who is moved to give it up in exchange for a claim against an NBFI. NBFI's

[8] Exchanging money for NBFI claims creates an additional layer of claims between the ultimate borrower (who now borrows from the NBFI rather than from the individual who exchanged money for another type of liquid asset) and the ultimate lender (the individual who gave up money for claims). NBFI's are "just" intermediaries who in addition may change the *composition* of credit, increase saving, and increase the velocity of money and hence the amount of credit, by their activity.

Note that the deposit of money in an NBFI or in a CB is a purchase of an asset by the institution concerned. But, NBFI's can *only* "create" deposits in this fashion—by buying money for their claims.

[9] Both types of institutions, of course, must still persuade someone to hold their claims (see footnote 6). However, the creation of claims and the extension of credit are still different for the two types of institutions.

[10] Some of their reserves are kept in the form of vault cash and are a cash drain to the CB system.

must attract such money stocks from hoards and saving.[11] If an NBFI grants credit to a borrower by advancing him money, and if this money is not immediately deposited in that NBFI or another NBFI, the reserves of the lending NBFI and of the system of NBFI's are reduced. The loss of reserves equals the amount of the loan. Contrast this with the CB system. When CB's make loans there is no reserves loss for the system. In R. Thorn's terminology, the NBFI's have difficulty in "recapturing" their loans.[12] The individual NBFI and the NBFI system both lose reserves by their credit extension, while the same activity by the CB system only results in reserve losses for the individual CB (again abstracting from cash drain).

Observe, again, that it *looks* as if both the individual NBFI *and* the NBFI system have experienced a multiple expansion of credit and deposits because, *ex post* (i.e., after the proceeds of the credit extension have left the individual institution and the system), reserves (cash and CB deposits) are only a fraction of deposit claims. And again it is clear that this is a tautological multiple expansion resulting from the fact that total reserves have been reduced to a fraction of deposits—not deposits expanded by a multiple of reserves. True multiple expansion, in any meaningful sense, would only be possible if the reserves of the NBFI system were not withdrawn from the system in the course of lending and borrowing. From both a reserve loss and "multiple expansion" point of view, there is unquestionably a parallel between the credit extension of the individual bank and both the individual NBFI and the NBFI system. All three of these lose reserves in an amount equal to credit extension. Any one of the three can *only* reduce reserves to a fraction of deposits. The parallel, however, does not apply to the NBFI system and the CB system. The CB system loses no reserves by lending (unless we allow for cash drain); the NBFI system loses reserves in an amount equal to the new loans it makes. This is the crux of the matter.

III. *Legal Reserve Requirements and Non-Bank Financial Intermediary "Multiple Expansion"*

What would be accomplished by subjecting NBFI's to legal reserve requirements? Multiple expansion and contraction cannot be introduced simply by imposing fractional reserve requirements. Suppose the required reserves had to be held at the Federal Reserve. Then, when an NBFI gained deposits, member banks would find their reserves diminished. But when the NBFI loaned the funds out, member bank reserves would be replenished, except for the amount retained by the NBFI to satisfy the legal reserve requirement against the new deposits.[13] It is important to observe that for NBFI's the amount of money that could be loaned would be slightly less than the new deposit. That is the case now. The only difference would be that now NBFI's set their own liquidity standards, whereas, if reserve requirements were imposed, their freedom would be restricted. In addition, the commercial banks would be subjected to reserve outflows and inflows. As

[11] Although it is mainly savers who choose to hold their savings in the form of NBFI claims, some idle balance holders may be attracted by the terms of NBFI claims. Again, the intermediary function of NBFI's shines through. They are mainly a channeler of savings back to the income stream. See Smith, *op. cit.*, pp. 535-538.

[12] "Non-banking Financial Intermediaries, Credit Expansion, and Monetary Policy," *International Monetary Fund Staff Papers*, 6, November 1958, p. 382.

[13] See Alhadeff, "Credit Controls and Financial Intermediaries: Reply," *op. cit.*, p. 198.

the NBFI system still loses reserves dollar for dollar with each loan, however, no multiple expansion is induced by creating a system of legal reserve requirements.

Until NBFI claims are directly spendable through transfer of liabilities by book entry, as demand deposits now are, the making of a loan or the acquiring of any asset by an NBFI must impose a reserve drain on the NBFI. The proceeds of all loans and investments of NBFI's must be in the form of money, and almost none of it will be immediately returned to the NBFI system.[14] To extend more credit, the NBFI system must, as already maintained, entice more money from existing deposits, other liquid assets, and/or current saving. If NBFI reserve requirements were increased, less of any increase in money they receive from new sales of their claims or asset liquidation could be lent, and some assets would have to be liquidated if they were already loaned up; if NBFI reserve requirements were decreased, more of any increase in money received from new deposits or asset liquidations could be lent, and the newly created excess reserves could also be lent.

Note that the introduction of reserve requirements or changes in their level would have no direct effect on NBFI *claims*. The level of these claims is determined by the public's choice, and the liquidation of NBFI assets to obtain reserves would not force a reduction in the claims of a "loaned up" NBFI system (as would be the case for similar action in the CB system) because such liquidation by each individual NBFI would draw reserves from the CB system and not from the NBFI system. Reserve requirement changes for the NBFI would merely change the *composition* of assets for these institutions and not directly their liabilities.[15] Again, the lack of immediate connection between claims and assets of NBFI's should be stressed. Note also that, as the NBFI system still loses reserves dollar for dollar with each transformation of reserves to loans and investments, multiple creation or destruction of claims or credit does not and cannot occur, regardless of the level or changes in reserve requirements.

IV. *Other Effects of Reserve Requirement Controls on Non-Bank Financial Intermediaries: A Proposal*

Does this mean that NBFI's should not have reserve requirements imposed upon them or should not in any other way have controls over their activity extended? It suggests no such thing. The ability or inability meaningfully to create or destroy claims or credit as a multiple of some "reserve" is not the only consideration for attempting to control an institution in order to influence its credit creation (i.e., the passing of money to potential spenders). The strategic place of an institution in the credit granting process, the ability to devise controls that will influence them, the administrative ease with which the institution can be controlled, and the quantitative importance of the results of controls are all meaningful.[16] In reaching the decision to

[14] Of course, autonomous shifts in the public's preference for NBFI claims could result in a "once-and-for-all" bidding away of bank deposits, but it would be pure coincidence if this should occur at a rate equal to the lending rate of the NBFI system.

[15] See Alhadeff, "Credit Controls and Financial Intermediaries," *op. cit.*, p. 660.

As reserves are earningless assets, increases in reserve requirements could have secondary effects on NBFI claims by reducing the earnings of the intermediary. This probably would result in a lower yield on NBFI claims, and, as a result, less demand for these claims.

[16] See Smith, *op cit.*, pp. 552-553. The President's Committee on Financial Institutions has recommended cash reserve requirements be imposed on Saving and Loan Associations in order to (1) strengthen the authority of the existing

institute legal reserve requirements, however, these points must be weighed against equity factors (for the institutions, credit users, and financial markets), discrimination, and other real and financial costs.[17] Multiple creation abilities and even the fact that, as Smith found,[18] there is no evidence that NBFI's behave in a cycle intensifying fashion, have little to do with the decision.

If the object of the institution of legal reserve requirements on NBFI's is contracyclical control of expenditures, then as long as NBFI's have something to do with the spending-saving-investment process they should certainly be considered for such controls. Indeed, understanding the difference between CB's and NBFI's brought out by this discussion suggests a possibly valuable control that seems to have received little attention. Quite aside from arguing that legal reserve requirements should be imposed because NBFI's are like CB's, a case can be made for imposing *variable* legal reserve requirements on NBFI's in order to constrain their ability to change the velocity of money.

As was seen earlier in this paper NBFI's extend credit by first attracting money balances and lending that portion which they do not require for their own transactions-precautionary liquidity. Thus, NBFI's extend credit only by increasing the velocity of money and increase the total amount of credit (as opposed to its composition) only to the extent that by offering a more desirable money-substitute they succeed in reducing the demand for money below what it would otherwise be. Since NBFI's without a system of legally required reserves set their own liquidity policies, they decide how much of their deposit inflow will be lent by determining the amount of transaction-precautionary liquidity they need.[19]

Legal reserve requirements do not fulfill the transaction-precautionary liquidity demand of financial institutions since they only provide a fraction of the funds to meet a deposit withdrawal (the required reserve ratio times the deposit withdrawal). Thus the imposition of legal reserve requirements, no matter where the reserves are held,[20] will have little effect on the amount of liquidity *already* held by NBFI's; for all practical purposes legal reserve requirements will be a completely additional portion of deposits that cannot be re-lent. Not only will it reduce, all other things being equal, the amount of credit NBFI's can extend, but varying the legal reserve ratio will make it possible to influence that amount contra-cyclically. That is to say, the velocity of money can be more directly influenced by impounding and freezing a variable portion of NBFI's fund inflows and hence limiting their ability to extend credit.

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supervisory agency in the public interest, (2) eliminate inequities between CB's and NBFI's, and (3) supplement monetary policy at times. See *Report* of the Committee on Financial Institutions to the President of the United States, Washington: GPO, 1963, pp. 14-18.

[17] By equity and discrimintion factors, we mean the real and subjective costs to *all* parties of readjusting to new rules—rules which may now favor some borrowers and lenders, but to which adjustments have already been made.

[18] Smith, *op. cit.*, pp. 538-553.

[19] Evidence is clear that NBFI's do not hold "excess" liquidity which they activate whenever credit demands increase. See W. C. Freund, "Financial Intermediaries and Federal Reserve Controls Over the Business Cycle," *Quarterly Review of Economics and Business*, 2, February 1962, pp. 26-28; and S. H. Axilrod, "Liquidity and Public Policy," *Federal Reserve Bulletin*, October 1961, p. 1172.

[20] If NBFI legal reserves are held at CB's, the amount of money and the credit granting power of CB's will not be influenced. This would also be the case if reserves were held at an institution like the Federal Home Loan Banks since they in turn keep their balances at CB's. If reserves are kept at the Fed, the reserves and deposits of the CB system will contract.

A flexible monetary policy already affects NBFI lending by affecting the availability of money to exchange for NBFI claims, by influencing the supply of short term finance from banks to NBFI's, and by affecting the value of NBFI portfolios.[21] In addition—or possibly as a result—there seems to be no evidence that NBFI's credit extensions are de-stabilizing; [22] indeed they seem to grow less fast during expansions and periods of tight money.[23] This makes little difference, however, given the criteria described earlier in this section. The question is simply will variable reserve requirements on NBFI's improve our ability to influence credit creation in a way that is of *net* advantage for public policy? This question is not easy to answer.

In order to get some idea of the quantitative importance of variable reserve ratios, savings and loan associations (SLA's) were considered. In the period 1950-60, the ratio of demand deposits and currency to savings shares varied between 2.9 and 5.0 percent, and the ratio of demand deposits, currency, and federal obligations (total "liquidity") to savings shares ranged from 11.3 to 15.7 percent; the trend in both ratios was down over this period.[24] It was calculated, *assuming no other changes in assets or liabilities,* that a one percentage *point* change in the ratio of cash (currency and demand deposits) to savings shares would result in about a one percent change in the amount of credit obligations (mortgage and consumer) held by SLA's. In 1960, for example, an increase in the ratio of cash to savings shares of one percentage point (from 2.89 percent to 3.89 percent) would have increased the needed cash reserve by $620 million.[25] *Ceteris paribus,* federal obligations and/or mortgage and consumer credit would have to decline by an equal amount. If all of the contraction occurred in credit obligations (mortgage and consumer credit), the decline in such assets would be about 1.0 percent; if all the contraction occurred in federal obligations, the contraction in these assets would be 11.9 percent. Assuming that present *total* liquidity (cash and federal obligations) is "needed" for working liquid (transaction-precautionary) balances, all of the contraction would be in

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[21] See Shelby, *op. cit.*, pp. 538-541; Alhadeff, "Credit Controls and Financial Intermediaries," *op. cit.*, pp. 661, 665, and 667; Axilrod, *op. cit.*, pp. 1175-1176; and E. C. Ettin, "The Development of Financial Intermediaries and Interest Rate Determination" (forthcoming). For an opposite view, see A. F. Burns, *Prosperity Without Inflation* New York: Fordham University Press, 1957, p. 50.

There are at least two forces, each acting in the opposite direction. If income is rising, the flow of saving will increase, so that the major source of NBFI funds will rise (subject to a rising marginal rate of substitution of claims for money). On the other hand, the supply of precautionary and speculative balances declines as a result of a tight money policy (and higher interest rates), so it is more difficult for the NBFI to attract such funds. Since net saving is nearly always positive, perhaps these forces help to explain why NBFI's grow steadily but fastest in recession years.

It is also interesting to note that the growth of intermediary claims absorbs bank reserves available to support the supply of money to the non-financial public, which may help reinforce a tight money policy; this effect may be dampened by a feedback from the growth of claims to the demand for money proper.

[22] Smith, *op. cit.*, pp. 538-553.

[23] Freund, *op. cit.*, pp. 25-26.

[24] These and all other SLA data calculated from year end data of Board of Governors of the Federal Reserve System, *Flow of Funds/Saving Accounts, 1946-60,* Supp. 5, 1961, p. 44.

[25] These are, of course, marginal figures. If legal reserve ratios had been in effect over the period, the total amount of credit extended by SLA's would have been less, provided that the SLA's had not reduced their transactions-precautionary liquidity *because* of legal reserve ratios.

mortgage and consumer credit. Some of the contraction, to be sure, might be at the expense of federal obligations, but this would merely reduce the indirect credit supplied by SLA's. The size of the induced contraction is large enough to make the proposal worth considering.

Thus the imposition of legal reserve ratios would appear to have results that are quantitatively significant (using SLA's as an example), and we assert that NBFI's are important in the credit granting process and can be substantially influenced by using this proposal. The problems implicit in instituting and using such controls are extremely difficult to judge. We will merely list a few here.

First, the financial system is extremely flexible and dynamic.[26] It is impossible to predict what the imposition of controls over NBFI's would have on other financial institutions—old ones and those yet to be born. Thus, if reduction in earning assets lowered the return on NBFI claims, this proposal might influence both the quality of credit extended by NBFI's (as NBFI's attempted to "reach out" for more income) and the rate of growth of CB time deposits. It is in the latter area of NBFI-CB competition that the "equity" argument would be loudest. Second, since the largest portion of NBFI credit is extended to the mortgage markets—although this may not be the case in the future—these controls might sharply influence the housing market. Since other institutional forces already cause this market to move in a countercyclical way,[27] it can be argued that it is not necessary to add more controls to this area and even "wrong" to do so from an equity point of view. On the other hand, NBFI's might liquidate governments and bid for mortgages to replace their lost income.[28] Thus, more mortgage money might come from our proposal. If present liquidity is needed for transaction-precautionary needs, however, this possibility is unlikely. Third, funds that might otherwise go to NBFI's might, due to possibly lower yields on NBFI claims, flow into other financial assets so that the pro-cyclical pressure would merely be reallocated; controls begun one place must be generalized to be effective.

On balance, we feel that this tool has much to recommend it, although the equity problems are serious. However, these problems should not silence the consideration of what would be a useful and might be a necessary future tool.

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[26] See E. C. Ettin, "Development of American Financial Intermediaries," *Quarterly Review of Economics and Business*, 3, Summer 1963, pp. 51-70; and H. P. Minsky, "Central Banking and Money Market Changes," *Quarterly Journal of Economics*, 71, May 1957, pp. 171-187.

[27] R. A. Gordon, *Business Fluctuations*, New York: Harpers, 1961, pp. 491-492.

[28] This type of reaction (i.e., reducing liquidity in order to maintain income) by NBFI's to the institution of cash reserve requirements might be the result of forces similar to those Aschheim has proposed in an analysis investigating the effect of changes in CB reserve requirements on bank portfolios. Aschheim urges a distinction between "income effects" and "liquidity effects" associated with raising reserve requirements. The liquidity effect would "reduce the marginal utility of the 'moneyness' " of NBFI assets since with higher reserve requirements (for NBFI's, higher than they would voluntarily hold) they would have more cash to meet a given withdrawal. The "income effect" would increase the marginal utility of NBFI income since the return on part of their assets would be reduced from a positive to a zero level. Both forces would tend to cause NBFI's to "reach out" for additional income producing assets—probably at the expense of their government securities holdings. See J. Aschheim, *Techniques of Monetary Control*, Baltimore: Johns Hopkins Press, 1961, pp. 23-24.

► RICHARD WARD

This is a review article of recent writings on foreign exchange.

The Balance of Payments and the Foreign Exchanges

Balance of payments disequilibria of the postwar period and particularly the American deficits of recent years have stimulated a number of contributions to the literature of foreign exchange. Foreign exchange problems have assumed increasing importance as nations have acquired the means to moderate the business cycle. As the domestic economy has come under greater control, changes in domestic income, prices, and interest rates no longer react to the balance of payments. Control of the domestic economy aggravates the problem of external balance.

Most contributions to the foreign exchange literature have been in the area of policy rather than theory. Authors of policy prescriptions have frequently failed to relate policy to theory. An exception is Jerome Stein, who in the course of a study of the foreign exchange market analyzed the process of determination of the equilibrium spot and forward rates. Stein described the path to a new equilibrium following a disturbance in the existing exchange market. The disturbance is the emergence of a surplus in a country's balance of payments. The surplus increases the supply of foreign exchange relative to demand as exporters sell their foreign exchange earnings. Stein assumes two types of markets. In a "normal" period the market has confidence in the stability of a given set of spot and forward rates and expects that any deviation from these rates will be temporary. In a "speculative" period the market expects a change "in the normal

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set of prices, within a short period of time." [1]

When the balance of payments surplus weakens the spot rate of foreign exchange during a normal period, the banks, which Stein calls the "professional risk bearers," believe the rate to be temporary. They therefore take forward positions, supporting the forward rate, "as a result of the difference between the current price of futures and the price that is expected to prevail at a later date." [2] In equilibrium the spot price falls more than the forward price, and thus the forward premium increases (or the discount decreases). The example assumes no change in interest rates.

Conventional theory would assign more importance to interest rate differentials between the two countries involved. The following illustrates the process:

U.S. Treasury bills	3% per annum yield
U.K. Treasury bills	4% per annum yield
Differential	−1%
Forward dollar premium	2% per annum
Net yield	1% per annum

This is a disequilibrium situation. With this constellation of interest rates and forward premium, there is an incentive for flows of funds on a covered basis from the United Kingdom to the United States. Since the investor covers the exchange risk, and U.S. and U.K. bills are equally safe, the investor should be relatively indifferent as to which he holds. Funds should therefore flow to the United States. The theory of interest parity holds that the flow of funds will continue until the forward premium on the dollar is equal to the excess of British over U.S. Treasury bill rates.

If this theory is operative, then in the Stein example above one would expect that, because interest rates are unchanged, the forward premium would remain unchanged. Stein argues that there are not always sufficient supplies of funds for interest arbitrage to adjust the forward rate to interest parity. He cites as an example the period July 1960 to November 1961 in which there was considerable divergence between British-U.S. Treasury bill differentials and the forward premium. One way of viewing Stein's position is that the speculative supply of forward exchange is greater than the demand arising from interest arbitrage.

J. H. Auten takes a similar approach in an analysis of the British-U.S. relationship in 1960-61.[3] He notes that the interest parity relationship broke down even though "the flow of funds from New York to London was quite large by recent standards." [4] His explanation lies in the large speculative demand for forward sterling resulting from the fact that the forward rate on sterling dictated by interest parity would be quite close to sterling's lower support point. Confidence in the future spot rate was the result of the government's policy of intervention. "It is a short step to the view that when the forward rate is driven near, but not actually to, the lower support point there will be large, if not unlimited, speculative demand in the forward market." [5]

These analyses of forward rates are not really attacks on the interest parity theory so much as examinations of impediments to its fulfillment. Any deviations from the interest parity relationship are always explainable in terms of rigidities which block a sufficient movement of funds.

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[1] Jerome Stein, *The Nature and Efficiency of the Foreign Exchange Market*, Princeton University, No. 40 of Essays in International Finance, 1962, p. 28.

[2] *Ibid.*, p. 32.

[3] J. H. Auten, "Foreign Exchange Rates and Interest-Rate Differentials," *Journal of Finance*, XVIII, March 1963, pp. 11-19.

[4] *Ibid.*, p. 17.

[5] *Ibid.*, p. 16.

Even in these cases of highly elastic demand for forward exchange, if interest arbitrage funds were sufficiently elastic the interest parity relationship would still prevail. Stein is incorrect in stating that "equilibrium exists" when the forward premium has increased in his example of a "normal" period. Equilibrium does not require this.

Stein's analysis of a speculative period is consistent with conventional theory. Since there is, by definition, an expectation of changes in the normal set of exchange rates, a fall in the spot exchange rate will be accompanied by a greater fall in the forward rate, with a consequent reduction in the forward premium (or increase in the discount). Speculation would tend to make the interest parity relationship inoperative.

I. *Official Intervention Policy*

The greatest volume of new foreign exchange literature discusses governmental policy with regard to intervention on the foreign exchange market. Governments already intervene on the spot market to fix exchange rates, and proposals for change in this kind of policy center around increased latitude for free market forces. The forward rate is not so rigidly stabilized, and the question regarding this market is, should governments assume greater responsibility in determining the forward rate? Recent United States intervention in the forward market serves to enliven the latter debate. Einzig points up the possible importance of this experiment if it continues: "Until 1961 the operations of the Austro-Hungary Bank provided the only known instance of a forward rate policy that was pursued systematically over a period of years." [6]

[6] Paul Einzig, "Some Recent Developments in Official Forward Exchange Operations," *Economic Journal*, LXIII, June 1963, p. 243.

A series of Federal Reserve articles presents the details of this experiment and its official defense.[7] The program involves a number of motivations. For instance, one objective is to manipulate the reserve gains of foreign countries in such a way that they will not use their reserve accruals to buy gold from the United States. Under the program the foreign country takes its reserve gain in the form of a U.S. bond denominated in its own currency (thus avoiding an exchange risk) or dollars acquired through a swap arrangement which explicitly guarantees against exchange risks. These arrangements are essentially *ad hoc* and need not detain us in a review of fundamental questions regarding forward exchange policy.

The heart of the program is the United States' decision to influence forward exchange rates through official intervention rather than leaving their determination to the private market. Intervention stabilizes no particular rate. The officials decide in each case to what extent intervention will suit the purposes of the program. The program also involves intervention in the spot market, but this is of less analytical importance. Nations fix spot exchange rates through International Monetary Fund agreement, and since all major currencies are pegged to the dollar it follows that the dollar is stabilized relative to these currencies. The peg is not absolute, however, with some countries allowing as much as 1 percent deviation around par. The United States does intervene on the spot market within this range, but the range is already so small

[7] Charles A. Coombs, "Treasury and Federal Reserve Foreign Exchange Operations," *Monthly Review*, Federal Reserve Bank of New York, XLIV, October 1962, pp. 131-139; XLIV, March 1963, pp. 39-45; and XLV, October 1963, pp. 147-151.

that this intervention does not introduce much additional control. More important is the decision to influence the forward rate, which heretofore was left free to float. The relationship between interest rates, forward rates, and capital flows as discussed above explains the significance of this move.

The official objective is to moderate forward premia or discounts believed to be temporary and disequilibrating. The German mark intervention which began the program in 1961 illustrates the principle. Because of expectations of a mark revaluation, the forward mark rose to a premium. The premium increased the cost of German traders' covering on the forward market against exchange risks of dollars they expected to receive in the future. It became cheaper as a means of cover to borrow dollars abroad and time the note to come due when the traders expected to receive dollars from exports. The traders incurred an interest cost, but they could invest the borrowed funds. The effect of the dollar borrowing was a capital outflow which added to the pressure on the United States balance of payments. This is only one example of the general proposition that a forward premium on a currency may attract funds to that currency. The United States intervened in the market to reduce the forward premium, which meant that it sold marks forward.

The debate over forward intervention generally assumes two possible conditions—unlimited intervention in support of a weak currency, or intervention with an inherently strong currency to achieve specific goals. In the latter case, intervention might serve the purpose of avoiding inflows of arbitrage funds while a country is raising its domestic interest rates. In the present program, the United States confines intervention to those conditions considered temporary and reversible, and thus the program falls in the second of our two broad categories. The official literature discusses each case of intervention with specific reference to the assumed temporary nature of the conditions leading to intervention.

Paul Einzig, an opponent of unlimited defensive intervention, accepts the general diagnosis that this is not the condition underlying the present experiment.[8] He believes that the forward discount on the dollar arose not from fears of devaluation of the dollar but of upward revaluation of some other currencies. Other writers commenting on the United States experiment have not been so careful to state or justify their diagnosis. One could argue that U.S. intervention is in support of a currency in fundamental disequilibrium because of the continuing U.S. balance of payments deficit and the long weakness of the dollar in the spot market, though to my knowledge no published work has specifically done so. A disadvantage of intervention is the difficulty of deciding which cases are really of a temporary nature, i.e., not fundamental. One official publication remarked that ". . . a key problem for monetary authorities is to determine which international flows of funds are undesirable but temporary and reversible and which are undesirable but chronic." [9]

Stein analyzes U.S. intervention through his assumption of a "normal" period as defined above.[10] Under these conditions he assumes that if a country's spot rate declines because of a balance of payments deficit, the decline will result in an increased forward premium (or reduced discount) for the weak currency, since the market assumes the weak rate

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[8] Einzig, *op. cit.*

[9] "Stabilizing Foreign Exchange Markets," *New England Business Review*, Federal Reserve Bank of Boston, March 1963, p. 4.

[10] Jerome Stein, "The Rationality of Official Intervention in the Forward Exchange Market," *Quarterly Journal of Economics*, LXXVII, May 1963, pp. 312-316.

to be temporary. If the authorities act to reduce the premium, foreigners will lose their incentive to hold the deficit currency covered by a forward sale at a premium. They will then sell their holdings of the currency, causing losses in reserves as the government supports the rate.

As previously noted, Stein's equilibrium condition, that the forward premium should increase in a normal period, is vulnerable. Even if Stein's definitions were accepted, the diagnosis of the United States case would seem inconsistent. The diagnosis assumes that the spot rate of the dollar falls more than the forward rate. In fact, the forward discount on the dollar was widening. The forward premium arose on the foreign currency, which was the currency rising on the spot market. Clearly these conditions do not fit Stein's definition of a normal period.

II. *Flexible Exchange Rates*

The advocates of forward exchange intervention favor it as a means of protecting the domestic economy from external shocks. With the forward-rate tool a central bank can act with less concern about the effects of its interest rate policy on capital flows; it can offset the effect by forward-rate manipulation. Somewhat paradoxically those who oppose intervention in the spot market also argue that the free exchange rate would help insulate the domestic economy from external shocks. Under free rates, no official reserves are necessary. Domestic policy need not concern itself with the state of reserves, though it cannot be entirely oblivious to the reaction of exchange depreciation on the domestic economy. Under free exchange rates the exchange market, rather than changes in official reserves, achieves external balance. If a nation wishes to undertake an expansionary monetary and fiscal policy, the resulting tendency to increase imports will reflect itself in the exchange market as the currency of the expanding country tends to depreciate. The exchange rate will necessarily move until it eliminates the excess demand for foreign exchange. The demand and supply of foreign exchange for both capital and current account will respond to the changes in the exchange rate. This process avoids a balance of payments problem in the conventional sense of loss of reserves, and in a world-wide system of free exchange rates there would be no need for international liquidity or reserves. Flexible exchange rates are one possible means of solving the shortage of international liquidity that many analysts presume is developing.

Walter Salant headed a Brookings Institution study group which projected basic movements in the United States balance of payments to 1968.[11] The general conclusions of this projection were that the United States would be well on the way toward complete correction of its balance of payments disequilibrium by 1968. This would result from increased price competitiveness of United States products as European inflation outpaces inflation in the United States, and from the return on the growing stock of United States assets abroad. Fulfillment of this projection would choke off the world's increases in holdings of liquid dollars, which form the bulk of its increases in reserves. Unfortunately, the authors could not use their own balance of payments projection to estimate the reserve effects, because the projection excluded some of the fac-

[11] Walter S. Salant, Emile Despres, Lawrence B. Krause, Alice M. Rivlin, William A. Salant, and Lorie Tarshis, *The United States Balance of Payments in 1968*, Washington: The Brookings Institution, 1963.

tors that enter into foreign dollar gains. Nevertheless, the general conclusions are consistent with the views of Triffin and others that further contributions of the United States toward world liquidity will inevitably slow down as the ratio of its gold holdings to liquid liabilities declines.

The Salant study offered two possible plans to meet the liquidity shortage—a preferred solution and a second-best plan in case the first were unattainable. The preferred solution would set up an international money which would be the liability of an international payments union. Surplus countries would deposit reserves with the agency and receive international deposits. The union would then receive as assets the currency holdings of the surplus countries. The authors seemed to feel that such an internationalization of reserves would set the stage for an orderly increase in reserves through credit facilities of the payments union, and would reduce the vulnerability of reserve currency countries to withdrawals by foreign governments. The report did not detail the plan, but it is obviously similar to the well known plans for an international central bank, though perhaps less far-reaching. Although highly significant, proposals for an international clearing union are not sufficiently new for discussion here.

The second-best solution of the Salant study would involve a modified system of flexible exchange rates. The plan would divide the non-Communist world into two large blocs—the sterling-dollar bloc and the European Economic Community bloc. Exchange rates would be fixed within each bloc, but would be free to fluctuate between blocs. The sterling-dollar bloc would include the United Kingdom and the United States and other countries which wished to join because of their close ties with the bloc. The other bloc would include EEC member countries and other countries which wished to align themselves.

Before considering the assumed advantages of the plan, let us see why the authors consider it second-best. They prefer a system of fixed exchange rates because this system is most conducive to the flow of "trade and productive international investment, thus contributing to efficient use of world resources and to economic welfare." [12] Traders can cover exchange risks on the forward market, but "the discouraging effects might still be substantial." It is true that the forward market is not a complete answer to exchange risks. An exporter can keep a stable price for his product, but the price in terms of foreign exchange could fluctuate and along with it demand for the product. An importer may build his inventories at one home-currency price and then find the value of his inventory decline in home currency because of exchange rate changes. However, the current system of exchange rates does not avoid all disadvantages of flexible rates because provisions are made for occasional revaluations. Long-term investment in particular faces exchange risks under this "adjustable peg" system. The authors make it clear they prefer a system of fixed rates with no provisions for change and sufficient reserves to engender confidence in the system. The present system does not meet these conditions.

The Salant group does not develop in sufficient detail its plan for a system of flexible exchange rates between blocs, and there is some confusion in details that did receive attention. For instance, they say that "(i)f a whole bloc were in deficit, the surplus countries of the other bloc would be induced to enter the market in support of the weak currencies to prevent unwanted appreciation of their own currencies." Since such intervention is inconsistent with free rates, the significance of the statement is unclear. In general, however, the system would seem to work as follows. Each country would be com-

[12] *Ibid.*

mitted to support the currencies of other direct members of the bloc. Countries other than EEC, U.S., and U.K. would apparently continue to use reserves to peg their currencies to one of the two blocs. When a country was supporting another's currency, it would acquire the currency of the deficit country (i.e., lend short). These provisions for mutual support reduce the need for reserves, but each country would have to keep its policies closely in line with the others as a condition of continued support. Between blocs exchange rates would be free to fluctuate as the means of effecting payments equilibrium. The United States would relinquish its support price for gold; otherwise, the EEC bloc members might still acquire dollars and convert their holdings to gold, thus supporting the dollar relative to their currencies. Demonetization of gold would be essential in order to establish the new system.

One benefit of the proposed system would be the freeing of the dollar as an international currency. The dollar's status carries with it costs for the United States in the form of restraints on its domestic policies because of the need to maintain gold convertibility. Freeing of the dollar is possible, however, without necessarily establishing the bloc system. If mutual support replaces reserves within blocs, it is only a short step to arranging such support between blocs. There are still other means of demonetizing gold and relieving the dollar burden, as the discussion below on reciprocal currency holdings will indicate.

The essential benefit of the plan rests on reducing the need for world reserves. Nations need no reserves for currency stabilization between blocs, and because of mutual support they need only small reserves for intra-bloc stabilization. The plan preserves some of the advantages of fixed rates by maintaining them between countries that are closely integrated. One might view the proposal as a flexible rate plan which recognizes that national boundaries do not necessarily draw the optimum areas for exchange stability. The criteria by which the authors drew the boundaries are not, however, entirely clear. Some theoretical work has progressed toward defining conditions for optimum currency areas, but that work is not currently at the stage where its application to existing problems is readily apparent. The logic of the blocs drawn in the Brookings study rests on the current status of economic interdependence between nations, and the plan might become less logical as conditions changed.

Some freedom from external effects of domestic policy might result from the bloc proposal, but alignment of policy within blocs must, if anything, be closer. Such a system would also tend to promote the bloc approach toward international economic, and perhaps political, relations, a development which already has gone too far.

The Brookings study, along with a number of others, notably that of the Commission on Money and Credit, recommended a widening of the allowable limits of fluctuations on the exchange market. (For the Brookings study this recommendation is a part of its preferred, rather than second-best, proposal.) The wider exchange rate limits would offer some of the advantages of flexible exchange rates, in that exchange rate changes could absorb some of the balance of payments disequilibrium. Wider limits might also reduce de-stabilizing capital flows. The present policy of maintaining exchange rates within narrow limits encourages international movements of funds. As long as the investor knows the maximum exchange rate movement, he can compute the possible exchange rate loss in determining net proceeds. Narrow support margins tend to reduce the cost of forward cover and encourage uncovered capital flows by minimizing exchange rate risks.

The advantages of wider support margins appear in the following illustration, using the dollar-mark exchange rate. Suppose a United States investor converts to marks at par value, in which case he receives 4 marks for each dollar. Under present exchange policy the investor would always be assured of getting back at least 99¼ cents for the 4 marks when he converted back to the dollar. This would represent a loss of 3 percent per annum on a three-month investment, and if the investment were for one year the loss would be only ¾ percent. Larger possible losses would discourage international short-term capital flows. If nations widened support margins to 2 percent from the present ¾ percent prevailing for most European currencies, then the maximum possible loss in the above example would be 2 cents for each dollar investment—an 8 percent per annum loss if the investment were for only three months.

Wider spot support points would also widen forward rate movements. The increased forward spreads could accommodate larger interest differentials between countries than is possible now, thus giving countries greater latitude in monetary policy. The Brookings authors felt that if the world adopted their proposal for an international unit of account (the preferred proposal), speculative capital flows would be stabilizing. Under such conditions, the authors felt, widening exchange rates would give rise to private capital flows which would help stabilize exchange rates, thus obviating the need for movements in reserves to serve this purpose. It is not at all clear why widening of exchange rates would "give rise" to such flows. It is the other provisions of the program that would make capital flows stabilizing. It would seem more accurate to say that the increasingly stabilizing function of capital flows would reduce the need for official intervention. If capital flows were perfectly stabilizing, exchange limits would in fact be irrelevant. If they were less than perfectly stabilizing, widening exchange limits would not increase their stabilizing function.

III. *Reciprocal Currency Holdings*

An alternative system for decreasing dependence upon the dollar for liquidity lies in using a number of currencies to serve as reserves. Each country's gross reserves would consist of its holdings of the currencies of other countries, plus gold if it remains in the system. There is scattered evidence of United States' interest in evolving such a system. Robert Roosa, Under Secretary of the Treasury, made the first official suggestion of the system in May 1962. One of the stated aims of official intervention in the foreign exchange market is "to provide a means whereby reciprocal holdings of foreign currencies may contribute to meeting needs for international liquidity as required in terms of an expanding world economy."[13] Official sources have not articulated such a system, but F. A. Lutz has ably filled the gap.[14] As he describes it, the system would work as follows.

Each nation would continue supporting the exchange rate of its currency, when necessary, by providing foreign exchange to the market. A number of currencies in addition to the dollar could serve such a purpose. Each nation would hold currencies as reserves, and to build such

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[13] Board of Governors of the Federal Reserve System, *Forty-Ninth Annual Report*, 1962, p. 58.

[14] F. A. Lutz, *The Problem of International Economic Equilibrium*, Amsterdam: North Holland Publishing Co., 1962; and Lutz, *The Problem of International Liquidity and the Multiple-Currency Standard*, Princeton University, No. 41 of Essays in International Finance, 1963.

reserves the nation would take a part of its balance of payments surpluses in the currencies of deficit countries. The system provides no mechanism, however, by which any country is under compulsion to finance the balance of payments deficits of other countries. At the point where the surplus country ceased intervening in the market to stabilize its currency at the ceiling, the deficit country would then have to undertake stabilization, using its reserves. The volume of total reserves resulting from such a system would depend upon the decisions of all countries as to the manner in which they took surpluses. The chief advantage of the plan is that it does allow for increases in total world reserves without further straining the dollar to serve that purpose.

Some change in the status of gold would be necessary to implement such a system. One possible change would be to extend to other currencies the gold convertibility provisions which the dollar now exclusively maintains. The ability of a country holding dollar reserves to convert them at will into gold is a strong inducement to hold the dollar. Countries' unwillingness to hold other currencies as reserves even when the dollar is weak on the exchange market is strong evidence of the importance of gold convertibility. Gold convertibility of other currencies might remove this favored status of the dollar.

The other possibility is to go in the other direction and remove gold convertibility of the dollar. Then it is likely that the system would be possible only if some currencies carried exchange guarantees to induce countries to hold them as reserves. Exchange guarantees would provide that in case of a devaluation, the devaluing country would write up the values of its currency held as reserves so that the holding country would sustain no losses. In such a system the abandonment of gold would not mean the abandonment of fixed exchange rates. The United States would, like other countries, support its currency through market intervention. It would use convertible currencies for such intervention, acquiring them through sale of its gold stock. Countries could hold gold in their reserves, but with no country maintaining gold convertibility the holding of gold would be the equivalent of holding any other commodity for which the free market determines the price.

Reciprocal currency holdings could be the form of reserves held in the Salant, two-bloc flexible exchange rate system described above. In this case the reserves would serve for supporting exchange rates within the bloc only, and reserves would consist only of currencies of bloc members.

A disadvantage of the multiple currency system is that it offers no safeguard against destabilizing actions by the authorities. In difficult times there might be temptation to dispose of currency holdings if there were doubts about their safety. Exchange guarantees could not dispel all doubts. As one country sells its holdings, it acquires its own currency formerly held as reserves by other countries. In this way there is a general contraction of reserves, and it is quite possible that fluctuations in reserves will tend to be co-cyclical. Lutz counters that co-operation among central banks has developed to such an extent as to make this unlikely. But if the system requires "co-operation" of this magnitude, then it begins to resemble the plans that require some sort of automatic credits for deficit countries. One can then question the advantage Lutz claims for the plan: "If under it countries accumulate balances in others, this takes place of their free will." [15]

[15] Lutz, *The Problem of International Liquidity*, p. 17.

IV. *Diagnosis*

Despite the differences in remedy, many of the recent works seem to agree that the present exchange system is not working well. The International Monetary Fund agreement established fixed exchange rates, but they were not immutably fixed. All participants on the market know the chief sign of possible revaluation—chronic reserve losses or accruals. This likelihood of revaluation leads to destabilizing capital flows which aggravate the need for revaluation. The reserves backing up fixed exchange rates are themselves unstable. As the world's dollar reserves grow, the U.S. ratio of gold to liquid liabilities falls. This deterioration lessens confidence in the dollar, prompting conversions to gold which further press the ratio. Prescriptions generally go in the direction of lessening the need for reserves, or providing new institutional means of creating reserves to make the system work. Of the plans discussed in this paper, modified flexible exchange rates and forward intervention fall in the first category, and reciprocal currency holdings in the latter.

► PAUL EINZIG

This is a review article of A Description and Analysis of Certain European Capital Markets, *Paper No. 3 of* Economic Policies and Practices. *Materials prepared for the Joint Economic Committee, Congress of the United States. 88th Congress, 2d. Session, Washington, D.C.: U.S. Government Printing Office, 1964. Pp. XII and 280. $.70.*

European Capital Markets

In his standard work on Domenico Scarlatti, the eminent American musicologist Ralph Kirkpatrick put all his European colleagues to shame by providing many times more factual information about the life of the great 18th Century Italian composer than all his English, German, Italian and French biographers taken together. The material he produced had been there for centuries in public and private archives, within easy reach of European musicologists, but it was not until an American scholar crossed the Atlantic that the facts came to be collected. Mr. Kirkpatrick's remarkable feat of scholarship has now been emulated, this time in the sphere of financial literature, by an anonymous team of American Government officials and advisers. The report on European capital markets,[1] produced recently by the U.S. Treasury, contains many times more factual material on the contemporary organization, practical operation, economic aspects and legal background of the principal European markets for long-term capital issues than any and all European publications on the subject.

A Foreword to the report by the Secretary of the U.S. Treasury, Mr. Douglas Dillon, states with exemplary modesty that the major contribution made by this study lies not in providing new information but in sifting the evidence already available.[2] No doubt much of the information had been available, though by no means all of it. And even published official material had been dispersed in

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[1] *A Description and Analysis of Certain European Capital Markets* (hereafter referred to as *Report*).

[2] *Report*, p. IX.

many scores of official publications, written in some half a dozen different languages.

The publication of the report was indeed well-timed. It coincided with a sudden accentuation of foreign loan issuing activity on the various European capital markets. The declared object of this exercise is to provide information on those markets in a "relevant form for an American understanding of their functioning and development," [3] and to encourage American policies that will assist in its progress.[4] Its undeclared object is presumably to encourage and assist European Governments in developing their capital markets, and to encourage the increased utilization of these markets by a substantial proportion of borrowers and lenders in preference to the New York market.

Until a few years ago, such an effort on the part of the United States to assist in the development and expansion of New York's rivals among the European financial centres would have been inconceivable. Today, the need for the United States to divert to these rival markets a large part of foreign demand for long-term capital is all but generally realized. For the spectacular increase in that demand during the late 'fifties and early 'sixties has coincided with the decline of the willingness and ability of the United States to meet such requirements single-handedly. The persistent balance of payments deficit and the resulting decline of the American gold reserve, coupled with the increase of foreign dollar holdings, had made it impossible for the United States to remain as open-handed with financial assistance in the form of private long-term loan capital as it had been. Moreover, the impossibility of achieving stable equilibrium in the international payments mechanism without a resumption of Europe's traditional functions as a lender of capital had come to be realized.[5]

Even on the expectation that the balance of payments difficulties might cease sooner or later, the United States authorities were right in taking an interest in the development of capital markets in Europe. No doubt they were conscious of broader long-range considerations pointing in the same direction as the more immediate problem of relieving the balance of payments. The absence of adequate long-term lending facilities in European financial centres is apt to be detrimental to the efficacy of American monetary policy measures. Although the policy of dear money is primarily intended to affect short-term capital movements, it produces its effect partly through discouraging the outflow of long-term capital by raising long-term interest rates. But if potential foreign borrowers need the capital urgently and have no prospects of raising it elsewhere, they will raise it in New York in spite of the higher interest rates. If, on the other hand, good capital markets exist in Europe, higher interest rates in the United States are bound to divert there some foreign demand for capital whenever this suits the purpose of American monetary policy.

There is a distinct trend in monetary policy following on the recommendations of the Radcliffe Report [6] and the American Report on Money and Credit,[7] to attach more importance to influencing long-term interest rates than in the past. The United States monetary authorities would be unable to follow this trend effectively unless facilities for foreign issues in European capital markets were improved to make for more flexibility in the trends of international capital movements.

[3] *Ibid.*

[4] *Ibid.*, p. XII.

[5] *Ibid.*, p. X, and p. 3.

[6] Committee on the Working of the Monetary System, London, 1959.

[7] *Report of the Commission on Money and Credit*, Englewood Cliffs, N. J.; Prentice-Hall, Inc., 1961.

An American contribution of decisive importance towards the desired end was the announcement in July 1963 of the decision to adopt an Interest Equalisation Tax, thereby effectively checking the flood of new European and other foreign long-term issues in the New York market, and forcing the borrowers to find alternative accommodation in the European financial markets. As long as New York was cheaper than most of these markets, its resources more plentiful, its taxation measures more attractive and its official attitude less restrictive, the European markets had to be content with the overflow that New York had not wanted. But the diversion of most of the demand for long-term funds from New York "has created an unusual and profitable opportunity for the European banking and financial community to enlarge its role in long-term international lending." [8]

The decision to divert foreign long-term borrowing by means of the proposed new tax (at the time of writing it is still only a proposal) was taken and announced before the report was compiled. It is a pity that the Treasury's terms of reference did not include the elaboration of a series of recommendations on policies and measures the United States should adopt in order to achieve the desired end of relieving the dollar of the pressure caused by excessive foreign long-term borrowing. Even so, the report can serve that end by providing foreign governments with information to help them in reaching policy decisions to liberalize their loan markets and assist in their development in other ways; and by facilitating the task of potential borrowers and lenders to consider all relevant factors before choosing the financial market in which to undertake an international financial operation. From both points of view, the systematic comparison by the report of the resources, facilities, rules, advantages and disadvantages of the various European markets is bound to be very useful to those concerned. The introductory chapters, analyzing similarities and differences, and the later chapters covering individual countries, are a goldmine for just the kind of information which is, in theory, easily available but which, when needed at short notice, cannot be reached without inconvenience, delay and difficulties.

The report examines the facilities available in the United Kingdom, Germany, France, Italy, Belgium, Sweden, and Switzerland. Unfortunately, the latter is treated more casually than the rest, while a detailed treatment of Holland is omitted altogether, even though both of these countries are, and are likely to remain, more important markets for foreign long-term loans than Italy, Sweden, or even Belgium. Nor did the report deal specifically with Luxembourg, apart from some casual references to it. Yet the Luxembourg financial centre has assumed considerable importance among actual and potential markets for foreign issues in Europe.

Fortunately, the authors of the report did not feel inhibited by its official character from being outspoken in their criticism of the deficiencies of the individual markets. Administrators, bankers and economists concerned with efforts to improve the capital issuing facilities in their respective countries should find these construtive criticisms by outside observers of considerable help.

A study of the factual and statistical material contained in the report gives an indication of the varying degrees to which the European markets fulfill the requirements of a good market for foreign issues. Every one of the countries under scrutiny has some major defects from that point of view. Thus, Britain's balance of payments position, though it appears to be in equilibrium at the time of writing, is balanced very precariously and the reserves available for safeguarding sterling against major pressure that is liable to arise

[8] *Report, op. cit.*, p. 37.

through overlending are much weaker than those available for the protection of the dollar, D.mark, French *franc* and some other currencies. From this point of view, Germany, France, Switzerland and Holland in particular are at an advantage compared with Britain.

From the point of view of the supply of savings available and their excess over *deserving* domestic requirements—the sky is the limit to *total* domestic requirements in any country—Britain's position is not nearly as strong as that of the United States with its much vaster economic resources. But it bears comparison with that of the major Western European countries. However, the question of adequacy of British capital resources for meeting foreign requirements does not at present arise in an essential way, owing to the operation of exchange restrictions on the issue and acquisition of foreign securities by U.K. residents.

From the point of view of the institutional and technical arrangements, the report pays repeatedly high compliments to London's financial organisation [9] which is undoubtedly superior to that of other European markets, especially to that of France and Germany. On the other hand, since German and Swiss investors are not precluded by exchange restrictions from acquiring foreign bonds, and even Dutch and Belgian investors can do so with the aid of investment dollars whose premium is kept down to a minimum through official intervention, financial houses in those countries are in this respect in a better position to practice their skill than their London opposite numbers. They can depend on reasonably substantial subscriptions by investors resident in their own countries, while London bankers have to place the entire loan abroad sooner or later.

The conclusion that emerges from these premises is that there is a strong case for a combination of London's superior facilities for issuing foreign loans with the superior facilities of continental Western Europe for absorbing them. This is in fact what is happening to a large extent. Before 1963, London left foreign issuing activity almost entirely in the hands of New York and continental banks, apart from issues for the Sterling Area and Scandinavian countries—later also for other E.F.T.A. countries. Even last year, foreign issues in London other than those referred to above were few and far between. On the other hand, continental financial centres have been actively engaged in foreign loan operations ever since 1957.

From the middle of 1963, New York's activities came to be curtailed by the proposed Interest Equalisation Tax, and Western European centres were not ready to assume the additional business relinquished by New York. It is indeed fortunate from the point of view of world-wide progress that London was prepared at that stage to resume part of its traditional activities, albeit in a timid and hesitant way. By the early part of 1964, issuing activity in London assumed considerable dimensions, even if it was confined almost entirely to transactions in which the London market merely acted as an intermediary.

The report was compiled before this new trend in London began to gather momentum and before the resulting pattern for the international allocation of long-term capital came to assume a more definite shape. Even at the time of writing, that pattern is still largely in an experimental stage. Nevertheless, we are now able to discern its broad outlines and to examine its technique, as well as its underlying principles.

While a fair proportion of foreign issues on the continent in recent years was made in "unit of account" denominations, such issues were exceptional in London and the large majority of foreign loans were issued

[9] *Report*, pp. 38, 43, 218 and 263.

in terms of U.S. dollars.[10] If the present state of affairs is maintained—as indeed with the increase of confidence in the dollar it is likely to be—we shall witness an institutional change not unlike in character and in importance to the institutional change that occurred in the late 'fifties through development of the market in Euro-dollars.

One of the shortcomings of the report—which was inevitable owing to its official character—is its too exclusive reliance on official sources. It states, for instance, that U. K. residents are not entitled to hold investment dollars beyond six-months.[11] Technically, this is undoubtedly correct. In actual practice, however, it only means that any U. K. resident wanting to retain his investment dollars for a longer period has to buy, at the end of six months, foreign securities—U. S. Treasury bills are the favorite medium for such operations—and resell them on the following day. This gives him another six months, at the end of which he is at liberty to repeat the performance. The British authorities are known to be well aware of this loophole, but they abstain from taking action to stop it, because they are quite content that by forcing holders of investment dollars to "re-register" their holdings every six months they can keep track of the whereabouts of these dollars.

The passages dealing with investment dollars are probably the least satisfactory part of this otherwise admirable report, not only because the subject is dealt with too briefly, but also because its authors contrived to convey a degree of confusion which I am sure could not exist in their own minds. For instance the report states: "If it be assumed that speculators make their decisions on rational grounds and *the control is complete,* one might expect that the premium would rise no higher than the amount of any expected devaluation."[12] Surely, the completeness of the control, so far from preventing the premium from rising higher, is the main cause of its rise, indeed, of its very existence.[13]

The authors of the report attach too much importance to the influence of an expected devaluation on the premium. In given situations that may be the decisive factor. But although, judging by the moderate discount on forward sterling, no devaluation of sterling is anticipated at the time of writing, yet the premium on investment dollars is around 11 percent. The authors' opinion that the premium is decisively influenced by speculative anticipation of sterling devaluation appears to be based on their view about the extent to which investment dollars are used as a hedge against devaluation by U. K. residents who are not in a position to hedge in any other way.

While the cost of hedging by means of forward exchange is at present a fraction of 1 percent p.a., and even during the run on the pound during 1957 it was never over 6 percent p.a., the cost of hedging through holding investment dollars was during recent months between 10 and 14 percent, while in September 1949, on the eve of the devaluation of sterling, it rose to 36 percent. Anyone who hedged at that cost spent in advance the bulk of his profit on the devaluation of sterling. On the day following the devaluation, the premium on investment dollars actually declined to four percent,[14] which meant that holders of investment dollars, while gaining on the devaluation, lost more than their devaluation

[10] *Ibid.*, p. 38.

[11] *Ibid.*, p. 257.

[12] *Ibid.*, p. 258. (My italics.)

[13] Realization of this was in fact implied in the sentence immediately preceding the one quoted above, stating that in 1957, but for extensive violations of exchange control, the premium would have been even wider (p. 258).

[14] M. S. Rix, "The Premium on U.S. Dollar Securities," *Economic Journal,* December 1950, pp. 667-668.

profit of 30.5 percent through the contraction of the premium on investment dollars. Given the fact that the devaluation was indeed far from being absolutely certain right until the moment of its announcement, and that in any case its extent might have been much more moderate, the "insurance premium" of 36 percent paid by buyers of investment dollars was grossly excessive.

What the authors of the report presumably had in mind was not hedging by holding investment dollars, but using them for acquiring dollar securities. Even in that respect, hedgers are apt to pay an excessive insurance premium. For their holdings, while benefiting by the devaluation, would also be affected in the opposite sense by the resulting contraction of the premium on investment dollars. This means that, should the extent of the devaluation prove to be considerably smaller than anticipated, they might actually suffer a loss. Those who use investment dollars for the purposes of hedging are more likely to try to safeguard themselves against contingencies other than devaluation, or additional to devaluation, such as the advent of a government hostile to business and to members of higher income groups.

There is a great deal of pure speculation in investment dollars, but, more likely than not, those engaged in it anticipate changes in the premium itself rather than changes in the sterling-dollar parity. Changes in the premium are liable to occur through a wide variety of influences, such as trends or anticipated trends in Wall Street or in the London Stock Exchange, the anticipation of a Socialist victory at the general election, changes in official policy regarding investment dollars, etc.

Admittedly, the importance of the market in investment dollars is at present, from the point of view of the issue of dollar bonds, quite negligible. No U. K. resident is likely to invest in such bonds with the aid of investment dollars, any more than he would think of using investment dollars for buying existing dollar bonds issued in New York. Investment dollars are used almost exclusively for the purchase of foreign equities which carry prospects of a capital appreciation that might easily wipe out the initial loss resulting from the premium. Those who hedge against the result of the general election, which is expected to cause a slump in British equities, are not likely to engage in such hedging by buying fixed interest-bearing securities—unless they are convertible debentures—which appear at present to have no prospects for substantial capital appreciation.

It is possible to envisage changes in the situation, however, which might greatly increase the importance of the investment dollar market from the point of view with which the report and this article are concerned. Conceivably, a sharp setback in the prices of dollar bonds might make them appear sufficiently attractive to investors to induce them to incur an initial loss of over 10 percent. A similar effect might be produced as a result of a further exaggerated decline in the yield of equities, or of the anticipation of a slump in equities. In all such and various other conceivable circumstances, movement of the premium on investment dollars might become an important factor that is liable to affect the demand for new dollar bond issues.

The premium is at present unnaturally high, partly owing to the British Treasury's policy of increasing the demand for investment dollars by authorizing their purchase for purposes other than portfolio investment. Should the Treasury change its policy, the deterrent effect of the premium might become materially reduced.

In conclusion, let us examine briefly the institutional significance of the recent growth in the practice of issuing foreign dollar bonds in Europe. Should it proceed further, it might produce an effect com-

parable to that produced by the evolution of the Euro-dollar market. The latter has brought about an internationalisation of unprecedented degree in the market in short-term credits. The former is liable to bring about a similar internationalisation in the market in long-term loans. It might become one day just as easy to borrow long-term dollars outside the United States as within the United States.

In the sphere of short-term credits the Euro-dollar system has given rise to a set of international interest rates distinct from, and largely independent of, domestic interest rates in the United States or in the countries where Euro-dollar business is transacted.[15] The new practice is liable to produce a similar effect in regard to long-term interest rates. Already there is a distinct structure of long-term interest rates on dollar bonds that is different from interest rates for corresponding maturities in the United States. While American measures of monetary policy are liable to affect indirectly the long-term rates on dollar bonds issued abroad, those rates are also affected, and at times to a larger extent, by conditions outside the United States.

Interest rates on foreign dollar loans issued in Europe will remain largely independent of those prevailing in New York, provided that some measure, such as the proposed Interest Equalisation Tax, prevents foreign borrowers from taking advantage of lower interest rates obtainable in the United States, and so long as it prevents U. S. residents from taking advantage of higher yields in Europe.

It is to be hoped that the system under which it is relatively easy to issue dollar loans outside the United States will remain an integral part of our international financial machinery, regardless of the ups and downs of the American balance of payments which might affect the volume of such transactions but not the permanency of the institutional change they represent. One of the reasons, if not the main reason, why this change would be to the good is that the European market in dollar bonds, in conjunction with the Euro-dollar market, tends to create a much-needed channel between short-term credits and long-term loans. The absence of an adequate channel has often been denounced as a major defect in the modern financial system. It is conceivable that, through a gradual lengthening of maturities of long-term deposits in the Euro-dollar market, the difference between Euro-dollar deposits and European dollar bonds will gradually become entirely one of degree, with no sharp line of demarcation between them.

The widespread application of the unit of account system for the issue of long-term loans may also be regarded as progress in the right direction. Provided that investors are able to overcome their distrust of the complicated formula, the system might attract long-term funds whose owners are reluctant to rely on any one currency. It might also attract borrowers who are not prepared to accept the one-sided disadvantages of multiple currency clauses. It would assist, therefore, in the international allocation of long-term capital.

A popularisation of the unit of account system is liable to be detrimental to the international use of the dollar. In recent years it has come to be realised, however, that the use of a national currency for international purposes is by no means the unmitigated blessing it had been assumed to be. What matters is to stimulate the flow of long-term capital, a flow which is incomparably more sluggish than that of short-term funds. If that end is furthered by the use of composite units of account, its wide adoption is to the general interest. The disadvantage of that solution, compared with the wide use of the dollar for long-term issues outside the United States, is that it would not help in the

[15] Paul Einzig, *The Euro-Dollar System*, New York: St. Martin's, 1964, Chapter 9.

improvement of channels of communication between short-term credits and long-term loans—unless units of account were also to be applied to short-term credits. Even though this is not impossible, it is difficult to visualise at present.

Admittedly, an expansion of the issuing activities in dollar bonds or unit of account bonds in Europe deprives American banks of a lucrative branch of activity. This need not necessarily be so, however. There is no reason why American banks, through their branches in Europe, should not take an active hand in such transactions. In any case, they would stand to lose a great deal more if, in the absence of an expansion of issuing activities in European centres, the dollar came from time to time under heavy pressure through excessive long-term lending abroad, than if part of foreign long-term borrowing were diverted from New York.

Bank Trust Investments: Their Size and Significance

This article—the first in an annual series—analyzes trust statistics for 1963 collected by the Office of the Comptroller of the Currency, and attempts to relate bank trust activity to the behavior of financial markets.

► STANLEY SILVERBERG

The role that bank trust departments play in managing investments and in influencing the behavior of financial markets has not received substantial attention in economic and financial literature. To a large extent this reflects the paucity of data on bank trust investments. In this paper an attempt is made to fill a considerable part of this data gap. In addition, we examine briefly the impact of bank trust investments on financial market behavior and, in the case of collective investment funds, data on the investment performance of bank trust departments.

Section I presents data covering the investments of all trust accounts where national banks have investment responsibility. In Section II we estimate the trust department assets for *all* commercial banks. In Section III we examine the importance of bank trust department investments and their likely impact on financial markets. In Section IV data are presented for collective investment funds, the one area of trust investments where detailed data are available on investment behavior. In Section V we examine the investment performance of collective investment funds.

I. *Trust Assets of National Banks*

Trust departments of national banks held assets of more than $65 billion at the end of 1963 in accounts where they had investment responsibility. Approximately $49 billion were in individual trust accounts,[1] and more than $16 billion were in employee benefit accounts. These were some of the statistical findings from reports submitted to the Trust Division of the Office of the Comptroller of the

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[1] Throughout this paper all trust accounts where investment responsibility exists (see footnote 2), other than employee benefit accounts, will be included under "individual trust accounts," although in some instances trust beneficiaries may not be "individuals."

Currency. All national banks exercising trust powers were asked to give market value figures broken down into a number of asset categories on all accounts in which they exercised some degree of investment responsibility at the end of 1963.[2] In addition, national banks provided data on the number of various types of trust accounts and a detailed breakdown on various types of employee benefit accounts.

In the past, comprehensive market-value data on bank trust department investments have not been available, although several surveys have attempted to estimate the magnitude of these investments.[3] Bank trust departments have been accustomed to carrying assets variously at cost or inventory value or unit control value (which may, among other things, mean one dollar per share or one dollar per bond). Summations of trust department asset values, thus, generally have involved summing nominal values, and as a result totals have not been particularly meaningful. In the 1963 Trust Department Annual Reports, national banks were asked to give market value figures either based upon the last account review, or, as of December 31, for all assets held at year-end 1963. The requirement of Regulation 9 with respect to review of trust accounts insures that all accounts are reviewed during the calendar year.

National banks were also asked to estimate the share of assets reviewed within the past three months and six months. These responses indicate that trust departments accounting for about 30 percent of reported assets valued these assets as of December 31, 1963. About 57 percent of all trust department assets were reviewed within the last quarter of 1963, and more than 80 percent were reviewed within the last six months of 1963.

Table 1 lists the assets reported for trust departments of national banks and the percentage distribution of these assets for all accounts in which the banks exercised some degree of investment responsibility. Table 2 lists by type of account and degree of investment responsibility the number and market value of employee benefit accounts for which national banks act as trustee. Assets correspond-

[2] The following excerpt from the Comptroller's instructions for the preparation of the Trust Department Annual Report defines the investment responsibility concept used throughout this paper:

> Investment responsibility is generally conferred on a fiduciary, unless relieved by the terms of the governing instrument, local law or court order, when acting in the following or similar capacities: trustee, executor, administrator, guardian of estates, committee of estates of lunatics, and managing agent. Even in those circumstances where a fiduciary is subject to the instructions of a holder of a power to direct investments, investment responsibility may nonetheless exist. The existence of such responsibility in the above or similar capacities must be presumed and the assets of all such accounts must be compiled for this annual report.
>
> The assets of accounts administered under the capacity of registrar of stocks and bonds, assignee, receiver, safekeeping agent, custodian, agency, escrow, or other similar capacity, where the bank does not have investment responsibility, should be omitted from this report.

[3] Raymond W. Goldsmith and Eli Shapiro, "An Estimate of Bank-Administered Personal Trust Funds," *Journal of Finance*, March 1959, pp. 11-17; *The Commercial Banking Industry*, a Monograph prepared for the Commission on Money and Credit by the American Bankers Association, Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1962, pp. 301-302; "Personal Trust Assets Increase," *Banking*, October 1961, p. 112. All of these estimates arise from surveys conducted by or for the American Bankers Association covering a sample of large personal trusts at banks with large trust departments (the last survey covers 128 trust departments). Apart from broader coverage as far as national banks are concerned, the definition of investment responsibility employed in the present study is somewhat broader, particularly with respect to our inclusion of accounts where trust departments act as managing agent.

Table 1

Assets of Trust Accounts Where National Banks* Have Investment Responsibility

(Dollar Amounts in Millions)

Assets	Amount	Percent of Total
U. S. Government & Agency Securities	5,690	9.0
State, County, Municipal Securities	4,973	7.9
Other Bonds	8,612	13.6
Common Stocks	35,670	56.4
Preferred Stocks	1,180	1.9
Mortgages	1,665	2.6
Real Estate	2,460	3.9
Miscellaneous	1,003	1.6
Own Bank Time Deposits	621	1.0
Other Bank Time Deposits	275	.4
Savings & Loan Shares	206	.3
Own Bank Demand Deposits	881	1.4
Other Bank Demand Deposits	59	.1
Not Classified †	845	
Total Assets	64,140	100.0

* Includes nonnational District of Columbia banks as do the national bank data in Tables 2-5.

† Reflects assets not broken down into appropriate categories because of late reporting or misinterpretation of report form. Percentage distribution was computed exclusive of these assets.

Source: Trust department annual reports for 1963 submitted to the Comptroller of the Currency.

Table 2

Employee Benefit Accounts Held as Trustee by National Banks

(Dollar Amounts in Millions)

Type of Account	With Investment Responsibility		Investment Directed by Others*		Total	
	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount
Pension Plans	6,413	10,774	1,846	875	8,259	11,649
Profit Sharing Plans	7,418	1,801	2,667	842	10,085	2,643
Stock Bonus Plans	34	82	47	5	81	87
Thrift Plans	169	1,152	84	317	253	1,469
Others	754	308	240	52	994	360
Total	14,788	14,117	4,884	2,091	19,672	16,208

* Since banks act as trustee for these accounts, it is assumed that investment responsibility still exists, despite the fact that investment decisions are directed by others.

Source: Trust department annual reports for 1963 submitted to the Comptroller of the Currency.

Table 3

Trust Department Assets of National Banks According to Bank Size

(Dollar Amounts in Millions)

Bank Size*	Employee Benefit Accounts		Other Trust Accounts		Total Trust Accounts
	Number of Banks	Amount	Number of Banks†	Amount	Total Amount
Less than 10	62	10	393	251	261
10—99	493	531	911	6,865	7,396
100—499	155	1,867	166	13,104	14,972
500—999	27	1,855	28	8,207	10,062
1,000—2,999	12	5,041	13	8,720	13,761
over 3,000	6	6,904	6	10,786	17,690
All Banks	755	16,208	1,517	47,932	64,140

* Bank size is based on annual report assets for year-end 1962.

† Figures for Number of Banks listed under Other Trust Accounts are identical to those that would correspond to Total Trust Accounts.

Source: Trust department annual reports for 1963 submitted to the Comptroller of the Currency.

ing to accounts in Table 2 are included in the figures of Table 1. In addition, national banks acted as agent for about 1,200 employee benefit accounts with assets of more than $2.6 billion; but since no investment responsibility was exercised over these accounts, they are not included in Table 1 or in figures discussed during the remainder of this paper.

Data for real estate, which include mineral and royalty interests, are most likely to be understated, and the extent of the understatement is difficult to estimate at this juncture. Because most accounts were valued prior to year-end 1963, there exists some discrepancy between reported figures and year-end values for marketable securities. Taking account of valuation dates and security price fluctuations, it is estimated that the common stock figure in Table 1 is *under*stated by about four percent. Market values for U.S. and state and local government securities are estimated to be *over*stated by approximately one percent.[4]

Table 3 lists the trust department assets of national banks according to bank size. Forty-five banks with commercial banking assets of $500 million or more at the end of 1962 managed almost two-thirds of the dollar amount of trust assets where investment responsibility was exercised, and these banks were trustee for more than 85 percent of the employee benefit accounts of national banks. Trust department assets of national banks are more concentrated than are commercial banking assets. The same 45 largest national banks had less than 45 percent of commercial banking assets of national banks at the end of 1962.

While trust assets are concentrated in larger banks, there is considerable variation among banks in all size categories with respect to the relationship between commercial banking and trust department assets. Some indication of this can be seen from Table 4 which focuses on trust

[4] This would indicate that national banks had investment responsibility for employee benefit accounts of about $16.4 billion and individual accounts of about $49.2 billion as of year-end 1963.

Table 4

Trust Department Assets According to Trust Department Size

(Dollar Amounts in Millions)

Trust Department Size*	Employee Benefit Accounts		Other Trust Accounts		Total Trust Accounts
	Number of Banks	Amount	Number of Banks	Amount	Total Amount
Less than 1	119	14	609	404	418
1—9.9	264	128	504	1,617	1,745
10—99	286	1,262	317	9,293	10,556
100—499	68	2,171	69	13,769	15,940
500—999	7	1,264	7	3,395	4,659
over 1,000	11	11,368	11	19,455	30,823
All Trust Departments	755	16,208	1,517	47,932	64,140

* Trust department size is based on total trust assets where the bank has investment responsibility.
Source: Trust department annual reports for 1963 submitted to the Comptroller of the Currency.

department size. The greater concentration of trust department assets indicated in Table 4 points up the fact that the largest trust departments are not always found in the largest banks. Trust assets for national banks as a whole are somewhat less than 40 percent of commercial banking assets. But, in the case of two of the larger national banks, trust department assets are more than two and one-half times commercial banking assets.[5] On the other hand, several large national banks manage trust department assets that are considerably less than ten percent of their commercial banking assets.

The asset distribution of trust departments varied somewhat according to trust department size. Individual trust accounts[6] of larger banks tended to have a larger share of assets invested in tax-exempt securities (13.4 percent for banks with trust assets over $1 billion). Banks with trust assets of $100 million to $500 million had a smaller share of assets invested in tax-exempt securities (9.1 percent) and a somewhat higher share in real estate and U.S. Government securities, but otherwise did not differ markedly from larger trust departments. In general, trust departments with a smaller amount of assets tended to have a greater concentration of assets in U.S. Government securities, real estate, mortgages, and deposits; and they tended to have a lesser concentration in common stock,

[5] This would be the case for at least three large state-chartered banks, and in two of these cases the multiple may be considerably higher than 2.5.

[6] To get at an estimate of the asset distribution of these accounts, it was necessary to eliminate the assets of employee benefit accounts, which tend to be distributed differently. Following the distribution of noninsured pension fund assets estimated for 1963 in the *Flow of Funds Accounts, 1963 Supplement*, Board of Governors of the Federal Reserve System, pp. 18-19, and taking account of estimated 1963 fund inflow and security price changes, it was assumed that the percentage distribution of employee benefit accounts was as follows: common stock 47.0; preferred stock, 2.0; corporate bonds, 41.0; U.S. Government securities, 6.5; mortgages, 2.0; and demand deposits, 1.5.

corporate bonds, and tax-exempt securities.

The greatest regional difference in asset distribution pertained to the share of trust assets in real estate. Whereas real estate accounted for less than two percent of the assets of individual accounts in many states (including Connecticut, Massachusetts, and Michigan), real estate investment played a much more important role in the west and southwest. In California, real estate accounted for more than 12 percent of individual trust account assets; in Texas, the figure was 15 percent. It should be remembered that there probably exists a significant downward bias in reported market value figures for real estate investment, so that the actual share of trust investments in real estate may be considerably higher than these stated figures and the figure in Table 1.

National banks exercised investment responsibility over about 305,000 individual trust accounts with assets of about $49 billion, or an average of about $160,000. But, here too, there was considerable variation among banks, with larger banks and larger trust departments having larger average accounts. Individual accounts of the two banks having the largest trust departments averaged more than $650,000. Banks having trust assets in excess of $1 billion managed about 20 percent of the individual accounts, and these averaged $330,000; whereas, for banks having trust assets between $10 and $100 million the average was $92,000, and for banks with trust assets of less than $10 million the average was about $40,000.

1,530 national banks managed approximately 540,000 trust accounts at the end of 1963. Of these, about 325,000 were accounts where investment responsibility was exercised by the trust department, including about 305,000 individual accounts and about 20,000 employee benefit accounts. More than 60,000 were corporate accounts, including about 5,000 accounts where national banks acted as registrar and about 6,000 accounts where they acted as corporate transfer agent. More than one-third of national bank corporate trust accounts, including more than half of the registrar accounts, were handled by the 11 banks with trust assets of more than $1 billion. In addition, national banks managed about 160,000 other trust accounts, of which about 62,000 were accounts where national banks acted as agent. Included in this category are many personal agency accounts where trust departments advise and, in effect, manage asset portfolios—without exercising "investment responsibility." From the standpoint of evaluating the economic role played by bank trust departments, these accounts are of considerable importance.

II. *Trust Department Assets of All Commercial Banks*

The picture presented thus far is a partial one. Since any economic generalizations, say, on the impact of bank trust investment policies on the behavior of financial markets, would be more meaningful with figures or reasonable estimates for trust operations of *all* commercial banks, we have endeavored to estimate trust department assets for state-chartered banks.

National banks account for about 54 percent of the banking assets of commercial banks; however, most evidence indicates that they account for a smaller share of trust department assets of commercial banks. Trust department assets appear to be concentrated in larger banks located in larger cities, particularly in New York, and most larger banks in New York City are state-chartered banks. Several older financial institutions which

were originally set up as trust companies have a higher-than-average ratio of trust assets to commercial banking assets, and these institutions, by and large, are now state-chartered banks. Trust department assets also tend to be concentrated in "wholesale" banks which concentrate on larger individual and corporate accounts. While several national banks fit into this category, national banks are more heavily represented among the retail-banking branch systems in the west. One can easily list innumerable exceptions to these generalizations about the concentration of trust department assets, but the generalizations provide, in our view, a rough picture of the bases for many of the deviations in the relationship between bank size and trust department size.

Figures are available for trust department gross income for national banks and insured state banks.[7] In 1963, trust department income for national banks and nonnational District of Columbia banks, which also report to the Comptroller of the Currency, amounted to 46 percent of the total trust department income for all insured commercial banks. (Figures on trust income for national banks and all insured banks are listed for all states for 1963 in the Appendix.) About one-third of trust department income of banks was earned in New York, and about 85 percent of this was by state banks. Outside of New York, national banks accounted for more than 60 percent of trust department income.

The New York State Banking Department has collected data on employee benefit accounts for which New York banks were trustee or acted as agent. The latest data available to the writer were for the latter part of 1962, and, assuming that the increase in 1963 paralleled that of all noninsured pension plans, we estimate that banks in New York State were trustee for employee benefit accounts with assets of about $21.1 billion at the end of 1963, of which only about $3 billion were accounted for by national banks. Apart from New York, we assume that employee benefit accounts of state-chartered banks vis-a-vis national banks are related in the same way as trust department income. While some state-chartered banks in Boston, Chicago and Philadelphia are known to have a considerable employee benefit account volume, several national banks have a considerable volume of such business too. And we see little basis for presuming a disproportionately large or small share of this type of business for state banks. Thus, we estimate that, at the end of 1963, state-chartered banks outside of New York were trustee for employee benefit account assets of about $8.5 billion, and that all state-chartered banks were trustee for employee benefit account assets of approximately $26.6 billion. This figure, when added to the national bank total, suggests that at the end of 1963 commercial banks were trustee for employee benefit accounts with assets of approximately $43 billion. This is approximately 83 percent of noninsured pension fund reserves at the end of 1963. In addition, commercial banks probably acted as agents for employee benefit accounts of at least $4 billion.

We estimate that state-chartered banks have investment responsibility for individual accounts with assets of approximately $52 billion—about six percent more than national banks. This estimate implies that state-chartered banks have a slightly lower ratio of individual trust assets to trust department income than do national banks. More than 50 percent of the trust income of state-chartered banks comes from New York banks—primarily New York City banks. But, a large share of this income comes from corporate trust

[7] Noninsured banks account for only about 0.7 percent of commercial banking assets and probably account for a smaller share of bank trust department assets.

business.[8] Trust income for New York City banks that would correspond to the individual accounts covered in our estimates amounts to only about half the share of trust income corresponding to these accounts for banks outside New York City.

We estimate that state-chartered banks in New York have investment responsibility for individual trust assets of about $21 billion. This is about $10 billion less than the estimate that would arise from assuming that these banks had the same ratio of trust income to individual trust assets as do all national banks. On the other hand, our estimate is higher than the estimate that would arise from assuming that individual trust assets were exactly in proportion to trust income that corresponded to those accounts. We estimate that state-chartered banks outside of New York have investment responsibility for individual trust assets of about $31 billion. This assumes a slightly higher ratio of assets to trust income than for all national banks. In both of these estimates, we have attempted to take into account the fact that, in New York and, to a lesser extent, outside of New York, trust assets and income of state-chartered banks are more concentrated in banks with large trust accounts than is the case for national banks. As we have already indicated, the average individual account is larger for banks with large trust departments. Given the structure of trust account charges, this would imply a higher ratio of trust assets to trust income for larger trust departments.[9]

Table 5 gives an estimate for all commercial banks of the dollar amount of employee benefit and individual trust accounts where some degree of investment responsibility is exercised. Estimates are included for various categories of assets. Figures on asset holdings are based primarily on the asset distribution in Table 1. However, these figures are not identical to results one would obtain by multiplying the percentages of Table 1 by the totals used in Table 5. An effort has been made to take account of security price changes that occurred between trust valuation dates and year end. Also, the figures reflect an assumed asset distribution for employee benefit accounts and differences in the regional distribution of trust department assets between national and state banks. As a result of these regional differences, for example, real estate plays a less important role, and tax-exempt securities play a greater role, than is indi-

[8] Corporate trust and agency income in 1960 amounted to 42.5 percent of trust income for 10 large New York City banks, while income from personal trusts was 18.4 percent of the total. Figures for the Boston and Atlanta Federal Reserve Districts suggest that the comparable figures for larger trust departments located outside of New York City would run well below half the New York share for corporate trust business and more than double the New York percentage for personal trust income. "Trust Department Earnings and Expenses in 1960," *The Trust Bulletin*, October 1961, pp. 34-40.

[9] Another factor taken into account was the assets of common trust funds. National banks manage a majority of common trust funds, but they account for only about 41 percent of common trust fund assets. The state bank figures are heavily weighted by a few banks in Philadelphia and are not, in our opinion, altogether indicative of the relationship between individual account assets of national and state banks. Nevertheless, common trust fund data *do* provide some basis for gauging the general magnitude of the trust operations of some state-chartered banks. In addition, a few state-chartered banks provide data or some clues in published statements on the magnitude of their trust operations. These, the common trust fund figures, and some personal conversations with trust officials were used to estimate the trust asset figures of some of the larger trust departments of state banks, in order to check the consistency of our estimates.

Table 5

Estimated Assets of Trust Departments Where Investment Responsibility Is Exercised—All Commercial Banks, Year-End 1963

(Millions of Dollars)

Assets	Employee Benefit Accounts	Other Trust Accounts	Total Trust Accounts
Cash	640	1,800	2,440
U. S. Government & Agency Securities	2,800	9,600	12,400
State, County, Municipal Securities	—	11,250	11,250
Other Bonds	17,630	4,700	22,330
Mortgages	860	2,400	3,260
Common Stock	20,200	61,750	81,950
Preferred Stock	870	1,900	2,770
Real Estate	—	3,800	3,800
Time Deposits	—	1,620	1,620
Savings and Loan Shares	—	350	350
Other Assets	—	2,030	2,030
Total Assets	43,000	101,200	144,200

cated by data for national banks. No effort has been made to adjust asset figures for any understatement of real estate values.[10]

[10] In 1961 the American Bankers Association estimated ("Personal Trust Assets Increase," *op. cit.*) that personal trust account assets of commercial banks were $62.3 billion in 1960. Allowing for security price changes, and assuming no other changes, would bring that figure up to about $75 billion. Considering the fact that our figures include a broader trust account coverage, the American Bankers Association figure may be reasonably consistent with our figure for other trust accounts. Their asset distribution indicates a slightly higher share of assets invested in common stock, a substantially higher share of assets invested in tax-exempt securities, and a substantially lower share invested in Treasury securities. The difference in asset distribution may reflect differences in the type of trust account coverage or in portfolio changes since 1960. Also, it may reflect the fact that the American Bankers Association figures are derived from a sample of large trust accounts which are distributed somewhat differently than smaller accounts and give a somewhat biased picture.

III. *Role of Trust Departments in Financial Markets*

Our estimates suggest that bank trust departments exercise investment responsibility over assets that approximate those of life insurance companies, exceed those of savings and loan associations, and amount to more than 45 percent of commercial banking assets. Financial assets of accounts where bank trust departments exercise investment responsibility are approximately 12 percent of financial assets owned by individuals, including all private insurance and pension reserves. Table 6 compares the estimate of trust department holding of specific kinds of assets with the outstanding volume of such assets. Trust department assets account for a significant share of outstanding state and local government securities, corporate stock and corporate bonds. Tax-exempt securities are largely confined to individual trusts, whereas corporate

Table 6

The Relationship Between All Bank Trust Department Holdings and Total Outstanding Volume of Selected Financial Assets at the end of 1963

(Dollars Amounts in Billions)

Financial Assets	Total Outstanding*	Bank Trust Departments	Bank Trust Departments as a Percent of Total
U. S. Government & Agency Securities	261	12.4	4.8
State, County, Municipal Securities	82	11.3	13.8
Long-term Corporate Debt	176	22.3	12.7
Mortgages	238	3.3	1.3
Common & Preferred Stock	575	84.7	14.7

* Figures are estimates of publicly held securities. U. S. Government securities are net of holdings of such securities by Federal agencies. State and local government securities are net of holdings by state and local governments. Figures for common and preferred stocks are net of holdings of such securities by nonfinancial corporations. They are based on estimates in the Securities and Exchange Commission **Statistical Bulletin.** The long-term corporate debt figure is from the **Economic Report of the President.**

bonds are relatively unimportant in individual trusts, but account for a large share of employee benefit account assets. Common stock is the most important category of asset holdings in both employee benefit and individual trust accounts.

In recent years, the total volume of outstanding state and local government securities has been increasing faster than holdings of such securities by individuals, either directly or through individual trusts. Banks and insurance companies have been playing an increasing role in the tax-exempt market; however, holdings of tax-exempt securities by individual trusts continue to be an important factor in the market for tax-exempt securities, particularly longer-term securities. The extent to which personal trusts continue to be a major factor in the tax-exempt market will be influenced by the distribution of wealth among individuals and the ability of commercial bank trust departments to attract accounts potentially subject to higher tax rates. Existing estimates on the growth of personal trusts suggest that there has *not* been a substantial inflow of funds into personal trust accounts in recent years.[11]

The role that bank trust departments play in the corporate bond market depends primarily on employee benefit accounts, and to a considerable extent this is becoming the case for the stock market

[11] Goldsmith, Lipsey and Mendelson (*Studies in the National Balance Sheet of the United States*, Vol. II, National Bureau of Economic Research, 1963, pp. 120-121) provide estimates for personal trusts from 1945 to 1959. Their coverage with respect to the type of account included is narrower than that of the present study, and consequently their figures are lower. Their figures show an increase of about 70 percent from $32.4 billion to $58.3 billion over the 10-year period from 1949 to 1959. Most of this increase derives from higher stock prices, and hence their figures show very little growth from net inflow of funds into bank administered personal trusts. Earlier estimates of personal trust assets by Goldsmith and Shapiro (*op. cit.*) had also suggested very little growth in personal trust assets during the 1950's.

as well. Pension plans currently hold most of the corporate bonds and about 25 percent of the common stock in trust department accounts where investment responsibility exists. Pension fund assets have been growing at a much faster pace than individual trust accounts, and this is likely to continue. Assets of all noninsured private pension plans have approximately doubled during the past five years. They were about $3.9 billion in 1948, about $10.6 billion in 1953, and approximately $51.3 billion at the end of 1963.[12] The tremendous percentage increase over the past 15 years, in part, reflects a rising stock market and the modest private pension plan coverage prior to the 1950's. While these *percentage* increases are not expected to persist, percentage increases *are* likely to continue to be very high and the annual *dollar* increases are expected to grow for many years. Thus, Daniel Holland has suggested "that the private industrial pension system will, on net balance, add annually to its assets at a rate increasing from $5.6 billion in 1960 to about $9.5 billion by 1970."[13] Noninsured pension plans accounted for almost 70 percent of private pension plan assets at the end of 1963, and the percentage has been increasing during the past 15 years. We have already estimated that banks act as trustee for more than 83 percent of noninsured pension fund assets, which would indicate that banks act as trustee for about 58 percent of the assets of private pension funds. Assuming that the same percentage relations persist, Holland's figure suggests that the annual increase in employee benefit trusts of commercial banks would be running at a $5.5 billion figure by 1970.[14]

Using Holland's projections of pension fund reserves and assuming no substantial change in equity prices or in the bank share of private pension fund business, banks would be trustee to employee benefit accounts with assets in excess of $100 billion before the middle of the next decade. Thus, we can expect employee benefit accounts to be major net purchasers of securities in the years ahead, as they apparently have been in recent years.

Net purchases of common stock by noninsured pension funds amounted to about $2 billion in 1962[15] and apparently exceeded $2 billion in 1963. For both of these years, net purchases by noninsured pension funds exceeded the volume of new equity financing. If noninsured pension funds continue to reflect their present equity-fixed income security mix over the next several years (actually, the trend has been in the direction of increasing the equity share), net purchases of equities probably will continue to exceed the volume of new issues coming to market, possibly by an increasing margin. Presumably, individual investors will be net sellers of equities—as they have been during the past two years. The rapid growth of pension funds may have a general bullish impact upon equity markets, and it may importantly influence price movements of certain types of equities. Insofar as pension and trust fund portfolio

[12] Figures from the *1963 Supplement to the Flow of Funds Accounts, op. cit.*, pp. 18-19 and "Financial Assets and Liabilities of Individuals in the United States," Securities and Exchange Commission Press Release, March 1964.

[13] *The Uses of Economic Research*, Forty-Third Annual Report of The National Bureau of Economic Research, May 1963, p. 59.

[14] Two qualifications might be offered. Since noninsured pension plans have been growing at a much faster pace than insured plans in recent years, we might expect this figure to be higher. On the other side, legislative changes may enable insurance companies to offer more formidable competition to banks in the employee benefit field in the years ahead.

[15] Daniel Seligman and T. A. Wise, "New Forces in the Stock Market," *Fortune*, April 1964, pp. 92 ff.

managers seek "blue chip" equities, as is commonly thought, such equities may tend to be bid up vis-a-vis "lesser quality" common stocks. In principle, we might expect sophisticated portfolio managers to seek out lesser quality issues that are less generously priced; but an analysis of specific investment policies is beyond the scope of this study and the data available in this study.[16] However, the potential impact of trust investment policies on the structure of equity prices is substantial.

If individuals have been net sellers of equities in the past few years, the question may be posed, has this also been the case for personal trusts managed by commercial banks? To what extent do the investment policies of trust departments managing personal trusts differ, if at all, from investment policies of individuals managing their own investment portfolios? Apart from the figures in Table 6, we can offer little in response to this question, but future trust department reports should begin to fill that gap.

Assets of bank trust departments account for almost 13 percent of outstanding long-term corporate debt, but a substantially smaller percentage of the market for fixed-income taxable investments. While the share has been growing as a result of pension fund purchases, growth in recent years has been less dramatic than in the equity market. Moreover, the bond market is a more professional, institution-dominated market, so that there may be little basis for assuming that trust department policies differ appreciably from those of other investors in this market. But, they might, and this, too, is an area where more detailed investigation might prove interesting.

The first three sections of this paper have dealt with *all* accounts where bank trust departments exercise investment responsibility. We have presented estimates of investments and raised questions with respect to the potential influence of trust investment policies on financial markets. The final two sections of this paper deal with the fraction of trust assets that are invested in collective investment funds.[17] Because of reporting requirements, more detailed data are available on these investments than on trust investments generally.

IV. *Collective Investment Funds*

At the end of 1963, more than 400 commercial banks operated approximately 720 common trust funds having assets of almost $4.8 billion. In addition, about 300 funds devoted exclusively to employee benefit accounts had assets of approximately $1.2 billion.[18] Collective investment funds afford an opportunity for banks to *commingle* all or some portion of the investments of a number of trust accounts, thereby enabling trust departments to provide diversification and continuing investment management at low cost for smaller and medium-sized accounts. The alternatives to collective investment funds probably are little diversification and infrequent investment

[16] At the present time research on the investment policies of pension funds is being done for the National Bureau of Economic Research by Roger Murray and Daniel Holland.

[17] Collective investment fund assets are included in the trust assets figures in Tables 1-6.

[18] The term collective investment funds is used throughout this paper to include both common trust funds and commingled pension and profit-sharing accounts, which we will refer to as employee benefit funds. All commercial banks are required to file common trust fund reports with the Comptroller of the Currency. National banks are also required to file reports on collective trusts for pension and profit-sharing accounts. While state-chartered banks are not required to file reports on the latter type of collective investment funds, many state-chartered banks have filed such reports. These provide a basis for an estimate of the assets of all employee benefit funds in Table 8.

review, on the one hand, and high cost trust operations, on the other. Increased emphasis on investment performance and on making trust operations profitable has encouraged banks to shift trust funds into collective investment funds in recent years. Assets of common trust funds have doubled during the past five years, and the percentage increase has been even greater for collective investment funds devoted exclusively to employee benefit accounts.

Despite their recent growth, assets of collective investment funds account for only about 4.2 percent of trust account assets where banks exercise investment responsibility. This might suggest that collective investment funds have received a disproportionate amount of attention in financial literature. To a large extent, this attention derives from the fact that reasonably comprehensive data have been available for common trust funds, whereas data on total assets managed by bank trust departments have been very sparse. Collective investment fund data afford an opportunity to appraise the investment policies of bank trust departments and invite comparisons with results of investment counselors and security market performance generally. In addition, changes in investment policies of bank collective investment funds may be indicative of changes in investment activity of other trust accounts where banks have investment responsibility.

Previously published statistics on collective investment funds covered common trust funds, but did not include those funds devoted exclusively to employee benefits accounts. The Federal Reserve's "Survey of Common Trust Funds, 1962" reported 564 funds with assets of about $3.6 billion.[19] As already indicated, our figures show 720 common trust funds in operation at the end of 1963 with assets of more than $4.8 billion. The increase of more than $1.2 billion (over 33 percent) derives from the establishment of about 150 new funds during 1963, a substantial net inflow into existing funds, and favorable stock market performance during 1963. Funds started during 1963 had assets of approximately $300 million at year end. The remaining increase in common trust fund assets was divided about equally between market appreciation[20] and net dollar inflow into existing common trust funds from new and existing trust accounts.

Both the net inflow into existing funds and the establishment of new funds were encouraged by the revision of the Comptroller's Regulation 9 in April 1963, which, among other things, eliminated the maximum size of any single account invested in a common trust fund. Prior to April, there had been in effect a $100,000 ceiling. At present, the only ceiling with respect to single account holdings in common trust funds is that no account may own more than 10 percent of the assets of any single common trust fund. The effect of this restriction varies considerably among individual banks and funds. At the end of 1963, there were a number of funds with assets of less than $100,000; whereas, two funds had assets in excess of $125 million. The mean common trust fund currently is about $7 million, although the median is considerably lower than that figure. Since accounts *substantially* in excess of $100,000 are rarely commingled in common trust funds, the 10 percent limit does not handicap most common trust funds.

[19] *Federal Reserve Bulletin*, June 1963, pp. 773-780.

[20] In the Federal Reserve's 1962 Survey, assets were reported according to the funds' last valuation date in 1962—which would be some time during the last quarter of the year, and in a majority of cases, October 31. Thus, the estimated market appreciation of about 12.5 percent occurred over a period of almost 14 months, rather than 12 months.

Table 7

Assets of Collective Investment Funds of All Commercial Banks*

(Dollars Amounts in Millions)

Assets	Employee Benefit Funds		Common Trust Funds		Total Collective Investment Funds	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
1. Cash	12.8	1.5	69.4	1.6	82.2	1.6
2. U.S. Government Securities	64.4	7.4	438.5	10.0	502.8	9.5
Under 1 Year	24.5	2.8	67.2	1.5	91.6	1.7
All Other	39.9	4.6	371.3	8.5	411.2	7.8
3. State, County, Municipal Securities	1.7	0.2	243.4	5.6	245.1	4.7
4. Corporate & Foreign Bonds	345.2	39.5	1,101.6	25.2	1,446.7	27.6
5. Mortgages	54.5	6.2	62.8	1.4	117.3	2.2
6. Preferred Stock	20.6	2.4	236.4	5.4	257.0	4.9
7. Real Estate	.6	0.1	5.3	0.1	5.9	0.1
8. Common Stock†	373.4	42.8	2,218.6	50.7	2,592.1	49.4
Railroads & Other Transportation	5.6	0.7	28.6	0.6	34.2	0.6
Utilities	70.0	8.0	533.9	12.2	603.9	11.5
Banks	17.5	2.0	120.3	2.7	137.8	2.6
Other Financial	21.2	2.4	125.7	2.9	146.9	2.8
Manufacturing	191.0	21.9	996.5	22.8	1,187.5	22.6
Retailing	16.4	1.9	109.3	2.5	125.7	2.4
Extractive (Including oil)	42.2	4.8	295.6	6.8	337.8	6.4
Not Classified	9.5	1.1	8.7	0.2	18.2	0.3
Total Assets (1-8)	873.3	100.0	4.375.8	100.0	5,249.1	100.0
9. Assets Not Classified‡	58.9		111.5		170.4	
Total Assets (1-9)	932.2		4,487.3		5,419.5	
Number of Funds	223		647		870	

* These figures were derived from 1963 collective investment fund annual reports submitted to the Comptroller of the Currency. Table 8 attempts to take into account funds that have not submitted reports to this office.

† Manufacturing is interpreted broadly to include firms primarily engaged in fabricating, processing, etc. Thus, for example, firms like United Aircraft, U. S. Steel, and General Foods are included under manufacturing. However, all firms generally classified in the oil industry are listed under extractive, and they account for most of the common stock in the extractive category. Common stock listed under "Not Classified" includes that of corporations not easily fitted into any of the listed categories (e.g., movie companies, advertising), and common stock of funds whose reports did not list individual issues.

‡ Assets of funds whose reports were received too late for detailed classification.

Table 7 lists the assets of employee benefit funds and common trust funds. Approximately half of the assets of collective investment funds were invested in equities, less than half in the case of employee benefit funds, and slightly more

Table 8

Number and Estimated Assets of All Collective Investment Funds as of December 31, 1963

(Dollar Amounts in Millions)

Assets	Employee Benefit Funds	Common Trust Funds	Total Collective Investment Funds
Cash and Fixed-Income Securities	680	2,350	3,030
Common Stock	520	2,500	3,020
Total Assets	1,200	4,850	6,050
Number of Funds	300	720	1,020

than half in the case of common trust funds.[21] The share of fund assets invested in equities is lower than the share of overall trust investments in equities (compare Table 5). To some extent this may reflect the fact that common trust fund beneficiaries tend to be in lower tax brackets where fixed-income investments are more attractive than they are to beneficiaries of larger individual trusts. A comparison with the Federal Reserve's 1962 common trust fund survey indicates an increase in the share of investments devoted to common stock, but this increase appears to derive wholly from the increase in equity prices during 1963 as opposed to a shift in net purchases of equities vis-a-vis fixed-income investments.

The figures in Table 7 were obtained from annual reports of collective investment funds submitted to the Comptroller of the Currency. Because the reporting requirement for common trust funds has been in effect only since April 1963, reports were not available at the time this paper was prepared from some funds whose fiscal years end in February and March, and from those funds which began in 1963 and have not completed their first fiscal year. It has been necessary to make adjustments for changing asset prices, projected changes in cash inflow and the assets of newly established funds to arrive at an estimate of the assets of common trust funds as of year-end 1963. Table 8 provides such an estimate for common trust funds and employee benefit funds.

From the standpoint of asset distribution, collective investment funds can be classified as equity, diversified, fixed income, and tax exempt. About 35 percent of those funds that submitted annual reports may be classified as diversified funds; but these held approximately 55 percent of the assets of collective investment funds.[22] There were approximately an equal number of fixed income and equity funds, the former accounting for about 19 percent of fund assets and the latter for about 21 percent. Tax-exempt funds had assets in excess of $200 million and accounted for about five percent of collective investment fund assets. Table 9 lists the number of funds, total assets, and asset distribution of each of the four types of funds.

[21] Many common trust funds do, in fact, include employee benefit accounts, particularly in the case where a bank maintains only one or two collective investment funds.

[22] Most commingled employee benefit funds are either devoted to equities or fixed income securities, whereas diversified funds account for about 43 percent of the number and almost 65 percent of the assets of common trust funds.

Table 9

Percentage Distribution of Collective Investment Fund Assets by Type of Fund*

Assets	Equity	Fixed Income	Diversified	Tax Exempt
1. Cash	1.1	2.5	1.4	1.2
2. U.S. Government Securities	1.7	13.8	11.4	0.2
Under 1 Year	1.3	2.3	1.8	
All Other	0.4	11.5	9.6	0.2
3. State, County, Municipal Securities		1.9	0.3	98.6
4. Corporate & Foreign Bonds		66.9	24.4	
5. Mortgages		7.5	1.2	
6. Preferred Stock	0.1	6.8	6.2	
7. Real Estate		0.5		
8. Common Stock	97.1	0.1	55.1	
Railroad & Other Transportation	1.2		0.7	
Utilities	21.9		13.1	
Banks	5.2		2.9	
Other Financial	4.9		3.3	
Manufacturing	46.4	0.1	24.6	
Retailing	5.1		2.6	
Extractive (Including Oil)	11.3		7.6	
Not Classified	1.0		0.2	
Total Assets (1-8)	100.0	100.0	100.0	100.0
Total Assets ($ Millions)	1,045.2	1,160.1	2,851.0	218.4
Number of Funds	261	313	263	27

* These figures were derived from 1963 collective investment fund annual reports submitted to the Comptroller of the Currency.

About 85 percent of the common trust funds and most of the employee benefit funds established in 1963 were single-purpose funds as opposed to diversified funds. The popularity of single-purpose funds has increased substantially in recent years as bank trust departments have come to appreciate the flexibility afforded by single-purpose funds. Most diversified funds hold somewhere between 40 and 60 percent of their assets in common stock, but it does not appear that many of these funds attempt to vary the proportion of equities to any considerable degree in accordance with stock market or business cycle forecasts.[23] If an account is to be invested according to a relatively constant equity-fixed income share, a similar result can be attained by splitting the account between an equity fund and a fixed income fund. However, the latter procedure allows a wide range of possibilities with respect to the distribution of each individual account between equities and fixed income securities; it can be split 30-70, or 80-20, etc.

The single purpose fund also enables banks to set up equity funds geared to

[23] Strictly speaking, those balanced funds that attempt to adhere to a consistent equity share do pursue a kind of formula planning. When equity prices rise, new funds or proceeds from security sales presumably would go into fixed income investments. On the other hand, when equity prices decline, maintaining the same equity share would dictate investing available or new funds in equities.

Table 10

Percentage Distribution of Collective Investment Fund Assets by Size of Bank*

Assets	Bank Size† ($ Millions)				
	Less than 100	100-499	500-999	1,000-2,999	over 3,000
1. Cash	2.3	1.7	1.5	1.3	1.4
2. U.S. Government Securities	11.5	10.1	12.1	9.5	5.1
Under 1 year	2.0	2.0	1.5	1.9	1.5
All Other	9.5	8.1	10.6	7.6	3.6
3. State, County, Municipal Securities	1.1	3.5	5.9	3.8	7.4
4. Corporate & Foreign Bonds	24.8	29.8	23.6	27.3	31.3
5. Mortgages	4.5	3.0	0.7	3.6	0.6
6. Preferred Stock	3.7	3.5	6.7	7.8	1.9
7. Real Estate	0.1	0.3		0.0	0.0
8. Common Stock	52.0	48.1	49.5	46.8	52.3
Railroad & Other Transportation	1.2	0.8	0.5	0.7	0.5
Utilities	11.1	11.3	12.3	11.2	11.2
Banks	2.4	2.5	3.0	2.2	3.0
Other Financial	2.5	2.7	3.7	2.0	2.8
Manufacturing	24.9	22.0	21.3	22.4	24.2
Retailing	2.9	2.3	2.1	2.3	2.8
Extractive (including oil)	6.7	6.3	6.5	5.8	7.3
Not Classified	0.4	0.4	0.2	0.2	0.6
Total Assets (1-8)	100.0	100.0	100.0	100.0	100.0
Total Assets ($ Millions)	514.9	1,321.5	1,272.8	1,095.1	1,045.3
Number of Funds	242	330	123	74	45

* These figures were derived from 1963 collective investment fund annual reports submitted to the Comptroller of the Currency.

† Bank size based on annual report totals for 1962.

so-called growth stocks, say, at the expense of current income, thereby tailoring funds to the "goals" of a limited number of trust accounts. Tax-exempt funds afford an example where the single purpose fund is most practical. At the end of 1963, there were in existence 35 common trust funds—12 of which were started in 1963—whose assets were invested almost exclusively in state and local government securities.

Table 10 lists the assets of collective investment funds and their percentage distribution according to bank size. About 90 percent of collective investment fund assets are concentrated in funds managed by banks with assets in excess of $100 million. This indicates a somewhat greater degree of concentration compared with the total assets of trust departments of national banks (Table 3), but may be consistent with the distribution of total trust department assets when state banks are included. The distribution of collective investment fund assets does not vary substantially according to bank size. Funds managed by smaller banks tend to hold a somewhat larger share of assets in cash and government securities. This probably derives from the fact that smaller banks manage smaller funds which tend to be forced to hold a greater share of total assets in liquid form for operating purposes. Tax-exempt securi-

ties tend to be concentrated in funds managed by larger banks, as, indeed, tax-exempt securities of individual trust accounts tend to be concentrated in larger banks. But, otherwise, the asset distribution of funds managed by smaller banks does not vary significantly from that of larger banks. It is interesting to note that even the industry distribution of common stock is practically identical for common trust funds managed by banks in different size categories.

The distribution of collective investment fund assets according to states (see appendix) parallels to a considerable degree the distribution of total trust department assets. Fund assets are concentrated in the east, especially in New York and Pennsylvania, which together account for about 40 percent of the assets of collective investment funds. Banks in these two states probably hold about the same share of all trust department assets of commercial banks.

V. *Collective Investment Fund Performance*

Regulation 9 requires banks to publish and make available financial reports on their common trust fund operations. These reports provide a limited basis for examining common trust fund performance. Those reports filed with the Comptroller's Office that contained sufficient information for calculating appreciation and income distribution per unit were examined in order to evaluate the investment performance of bank collective investment funds during 1963. When new accounts or additional funds are added to existing collective investment funds, they acquire additional units at the current per unit value of the fund. A comparison of the unit value at fiscal year-end 1963 with that of, say, 12 months ago can provide the basis for calculating price performance of the unit value and assets of the fund. Of course, for such price performance to be meaningful, it should be measured against funds with comparable investment goals or against market performance of some comparable mix of assets over the same period of time.

Before examining the performance statistics on collective investment funds, it should be pointed out that it is difficult to evaluate market performance over a short period—in this case, 12 months. For the most part the 12 month periods examined were periods of rising equity prices. Some of the equity groups that outperformed the averages during this period had larger than average declines during the first six-to-nine months of 1963. In the case of most collective investment funds, most investments are held for periods of considerably longer than 12 months. And the "character" of funds rarely changes suddenly; *i.e.*, equity funds heavily invested in utility and bank stocks do not suddenly become transformed into funds emphasizing railroad shares. Institutional inertia and capital gains taxes considerably limit the applicability of the economic maxim that "bygones are bygones," at least in the trust investment area. Thus, a realistic evaluation of the performance of collective investment funds probably requires a period of several years.

Where sufficient data were available from annual reports on earnings distribution and market appreciation, collective investment funds were grouped by type (asset mix) and fiscal year-end date. Thus, all equity funds with a fiscal year ending October 31, 1963, were grouped together, etc. In this way, we were able to compare market performance among funds over a like period of time, and to compare market performance of funds with various security price indices.

The performance of diversified and fixed income funds, taken as groups, is difficult to evaluate. Individual funds falling into these categories may vary significantly in asset distribution. Equity

Table 11

Performance of Collective Investment Funds in 1963

(All Performance Figures in Percent)

Type of Fund	Month in Which Fiscal Year Ended							
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Equity								
Number of Funds	11	4	10	13	19	52	15	15
Median Yield	3.5	3.8	3.7	3.5	3.6	3.7	3.5	3.0
Price Appreciation:								
Median	20.1	29.2	19.6	21.3	26.3	25.7	14.2	17.8
Best	27.9	31.7	26.9	28.7	33.3	38.2	20.3	26.9
Worst	17.0	22.2	15.2	17.5	14.9	6.2	8.1	14.9
Dow-Jones Industrials	18.5	25.9	16.3	19.7	26.6	28.1	15.6	17.0
Standard & Poor's 500 Stocks	18.7	26.7	18.7	22.6	27.4	30.9	17.6	19.2
Diversified								
Number of Funds	8	5	25	16	10	103	25	2
Appreciation & Yield:								
Median	11.6	17.6	12.9	13.5	17.4	16.4	10.2	11.7
Best	14.2	23.3	20.0	18.6	28.7	35.3	15.0	12.0
Worst	9.3	15.7	9.1	4.5	11.0	6.6	7.3	11.3
Fixed Income								
Number of Funds	11	6	12	10	18	36	20	16
Yield:								
Median	4.51	4.51	4.22	4.40	4.27	4.29	4.28	4.27
Best	5.04	4.63	5.02	4.87	4.71	5.03	5.10	5.10
Worst	3.80	4.24	3.90	4.00	3.80	3.54	3.40	3.95

funds, on the other hand, appear more uniform in the sense that all investments are primarily made in a single asset category—common stock. In practice, individual equity funds do reflect moderate (and in rare instances, considerable) differences in the degree to which stock portfolios can be characterized as defensive or venturesome. Equity funds and their performance naturally tend to invite comparisons with the performance of the popular stock price indices. However, apart from the qualifications suggested with respect to the appropriate length of time for reasonable evaluation, it should be recognized that collective investment funds generally reflect situations where a bank is acting as executor, administrator, guardian or trustee. Consequently, certain constraints are placed on the riskiness of investments.[24] These may take the form of a legal list of eligible investments as set forth in state statutes and regulations, or self-imposed restrictions that naturally derive from investing other people's money.

Table 11 lists some performance data for collective investment funds by type of fund and month-end date. Also listed

[24] It is difficult to tell whether limits placed upon the flexibility of trust investment policies importantly inhibit trust department portfolio managers and adversely affect their investment performance. Possibly a comparison of investment performance of legal and discretionary common trust funds would suggest some answers to such a question. But legal requirements do vary from state to state, and some inhibitions on

is the market price performance of Standard and Poor's 500 stock series and the Dow-Jones 30 Industrials. The former is considered by many to be the most representative stock price series, whereas, the latter, which is conceded to have shortcomings in selection and weighting, is probably the most widely observed stock price series. Equity funds tended to outperform the "averages" during the 12-month periods ending in May, June, and July, 1963. During the 12-month periods ending in August, September, and December, the performance of equity funds approximated that of stock price averages, and for the 12-month periods ending October and November, 1963, (when about half of the sample of equity funds ended their fiscal years) equity fund performance fell short of the averages. Some of the differences probably reflect random or seemingly random factors. But, there is also a question of a discrepancy between the asset composition of collective investment funds and the selected averages. More than 22 percent of the market value of stocks of equity funds was in utilities; more than ten percent was in banks and other financial corporations, but only about one percent was in railroads. This appears to involve a higher weighting of utilities and a lowering weighting of railroads than is reflected in the Standard and Poor's 500 stock series. That series does not include banking and other financial corporations.

During the second half of 1963, utility stock prices were relatively stable while industrial and railroad stock prices continued to advance. Also, lesser quality stock issues, which had lagged the market somewhat earlier in 1963, tended to outperform more conservative stock issues in the latter part of the year. Thus, most equity funds with fiscal year-end dates during the last three months of 1963 tended to underperform the market averages. Mutual funds also underperformed the market as a whole during the 12 months ending December 31, 1963.[25] A sample of 20 of the largest common stock mutual funds showed a median price appreciation of 15.7 percent. The median price appreciation for 20 so-called growth stock mutual funds was 17.3 percent, approximately the same as the 15 equity collective investment funds with a year-end date of December 31, 1963.[26]

Most fixed income funds appreciated modestly during their 1963 fiscal year. While a number had small losses, a few fixed income funds had gains in excess of five percent. Variations in performance reflected portfolio variations and some divergent movements in interest rates. While yields on Treasury and highest rated corporate bonds rose, yields on

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trust investments are, as suggested, self-imposed. After all, the penalties or dangers involved in losses from speculative investments probably far outweigh the personal rewards to the portfolio manager from above-average investment performance deriving from, say, speculative gains. As a matter of actual performance over the past decade, investments in "high quality" equities may have given rise to average or better-than-average results because of the increasingly important role of the institutional investor who prefers "high quality" equities.

[25] *Business Week*, January 11, 1964, pp. 82-84.

[26] The Wharton Study of Mutual Funds (Report of the Committee on Interstate and Foreign Commerce, 87th Congress, 2nd Session, August, 1962, pp. 16-21) indicated that, during the seven-year period prior to the study, mutual fund performance approximated the performance of Standard and Poor's 500 stock series when allowance was made for mutual fund holdings of cash and other liquid assets. The latter tend to be lower for bank collective investment funds than for mutual funds, but still averaged 3 percent for equity collective investment funds in 1963 (see Table 9). This tends to handicap collective investment fund performance vis-a-vis stock price averages (but it tends to give them an edge over mutual funds) since averages naturally assume 100 percent market participation.

lesser quality corporate bonds changed little and mortgage rates and secondary market yields declined. Preferred stocks and convertible bonds generally were strong performers in the latter part of 1962 and in 1963. Thus, there was more divergence in the performance of fixed-income collective investment funds in 1963 than might normally be expected, with funds heavily invested in mortgages, preferred stocks and convertible bonds outperforming funds devoted primarily to higher quality bonds.

The yield figures in Table 11 reflect per unit distribution to fund participants divided by year-end 1962 unit values. These figures are comparable to coupon yields rather than yields-to-maturity and tend to understate the latter by perhaps 20 basis points.[27]

The performance of diversified funds was in line with the performance of equity and fixed-income funds and the equity-fixed income security mix of diversified funds. The median return (yield plus appreciation) on diversified funds tended to approximate half the appreciation of equity funds for the comparable period plus a yield somewhere between that of equity and fixed-income funds. This tended to be the case for the diversified funds beginning fiscal 1963 with an average equity mix (about 50 percent), but, of course, there does exist variation in the equity mix of diversified funds.

The data on collective investment funds and their performance include funds and banks with substantial variations in size. The question naturally arises, do large banks and large funds show superior performance compared with smaller banks and smaller funds? For those funds whose performance was examined in this study, larger banks and larger funds did tend to outperform smaller banks and smaller funds with respect to price appreciation for equity and diversified funds. In the case of fixed-income funds, smaller banks and smaller funds performed at least as well as larger banks and larger funds.

The procedure followed was fairly crude and "conclusions" should not be considered much more than general observations. For each month and type of fund we counted the number of larger funds (above $5 million or above $10 million) whose performance was above and below the median, and we counted the funds managed by larger banks (assets over $100 million or assets over $500 million). Larger funds tend to be managed by larger banks, but this is not always the case. Some smaller or medium-sized banks have trust operations that are large relative to their commercial banking operations. Some of the larger banks manage more than ten collective investment funds, some of which are relatively small. We did not make any effort, nor did we feel we had sufficient data, to ascertain whether bank size was a significant factor in fund performance if we eliminated the effect of fund size.

The differences in performance according to size should not be exaggerated. For one thing, there were many individual instances where small banks and small funds were among the best performers. Very possibly, the results reflected somewhat more conservative policies by smaller funds—although this is not apparent from the asset distribution of funds according to bank size (Table 10). Another factor might have been the somewhat higher share of cash and liquid assets held by smaller funds.

The performance statistics cited in this report are, in a sense, a first look. Any real judgments on collective investment fund performance should be reserved until substantially more data are examined, and in future years we hope to be able to generate more complete data that are amenable to analysis.

[27] This is the case because bond prices in 1963 averaged below par and yield-to-maturity calculations take into account price appreciation to maturity.

APPENDIX

Selected Bank Trust Statistics by States

STATE	Accounts Where National Banks Exercise Investment Responsibility*				Trust Department Income in 1963			Collective Investment Funds of All Commercial Banks†	
	Number of Banks Having Accounts	Employee Benefit Accounts ($ Millions)	Other Trust Accounts ($ Millions)	Total Trust Accounts ($ Millions)	National Banks ($ Thousands)	All Insured Commercial Banks ($ Thousands)	National Banks As a Percent of Total	Number of Funds	Assets of Funds ($ Millions)
United States	1,517	$16,208	$47,932	$64,140	$264,093	$573,224	46.1	870	$5,420
Alabama	30	102	592	694	2,574	2,713	94.9	8	19
Alaska	3	1	1	2	58	58	100.0	0	0
Arizona	2	§	§	§	1,779	2,157	82.5	8	31
Arkansas	23	7	171	178	552	720	76.7	3	6
California	16	1,172	4,092	5,264	37,701	51,740	72.9	34	305
Colorado	22	77	861	938	4,763	5,010	95.1	28	125
Connecticut	13	169	1,726	1,895	6,279	14,379	43.7	19	124
Delaware	0	0	0	0	0	7,016	0	7	73
District of Columbia‡	6	148	991	1,139	5,222	5,222	100.0	8	54
Florida	55	127	1,549	1,676	7,363	9,104	80.9	23	37
Georgia	22	106	685	791	3,814	6,742	56.6	14	81
Hawaii	0	0	0	0	0	△	0	7	17
Idaho	3	5	20	25	207	230	90.0	1	**
Illinois	125	3,208	4,565	7,773	32,926	52,037	63.3	31	352
Indiana	93	191	1,290	1,481	5,251	7,128	73.7	19	53
Iowa	35	26	219	245	1,436	2,420	59.3	3	3
Kansas	34	18	254	272	1,134	1,233	92.0	2	3
Kentucky	51	19	212	231	1,482	5,167	28.7	11	42
Louisiana	18	48	148	196	1,179	1,412	83.5	1	2
Maine	18	14	183	197	1,020	1,490	68.5	15	43
Maryland	10	33	405	438	2,136	3,323	64.3	18	121
Massachusetts	57	561	1,986	2,547	11,196	21,487	52.1	41	396
Michigan	27	1,749	1,389	3,138	8,860	16,209	54.7	37	123
Minnesota	18	398	1,221	1,619	7,756	7,817	99.2	21	96
Mississippi	15	2	39	41	174	695	25.0	4	8
Missouri	26	110	894	1,004	4,311	9,437	45.7	24	231
Montana	8	2	28	30	122	376	32.4	6	6
Nebraska	12	49	305	354	1,998	2,030	98.4	11	32
Nevada	2	§	§	§	836	1,019	82.0	4	6
New Hampshire	21	4	117	121	435	511	85.1	7	8
New Jersey	83	68	921	989	7,693	13,847	55.6	29	80
New Mexico	9	4	106	110	598	616	97.1	3	10
New York	84	2,980	4,613	7,593	27,065	185,042	14.6	78	944
North Carolina	17	88	447	535	2,225	6,257	35.6	10	98
North Dakota	6	4	30	34	285	285	100.0	4	2
Ohio	47	709	2,552	3,261	11,264	24,419	46.1	64	319
Oklahoma	28	98	326	424	2,033	2,038	99.8	10	19
Oregon	2	§	§	§	3,115	3,298	94.5	8	66
Pennsylvania	156	2,761	8,012	10,773	24,548	53,514	45.9	97	1,075
Rhode Island	2	§	§		1,417	4,393	32.3	14	40
South Carolina	11	40	216	256	1,067	1,152	92.6	6	14
South Dakota	8	6	32	38	334	358	93.3	6	2
Tennessee	27	65	964	1,029	3,034	3,594	84.4	17	34
Texas	116	573	2,248	2,821	13,110	14,143	92.7	33	97
Utah	2	§	§	§	571	1,402	40.7	9	14
Vermont	13	3	31	34	165	470	35.1	5	6
Virginia	59	86	992	1,078	4,495	6,319	71.1	29	73
Washington	11	96	759	855	4,781	5,283	90.5	5	31
West Virginia	26	8	206	214	920	1,710	53.8	6	9
Wisconsin	34	121	378	499	2,633	6,016	43.8	22	91
Wyoming	11	1	31	32	176	186	94.6	0	0

* Trust assets for national banks are on the same basis as the data in Table 1. They are derived from bank reports without adjustment for asset price changes.

† Collective investment fund data are on the same basis as the data in Table 7 and cover only those funds which have submitted annual reports.

‡ National bank figures on trust assets and income include national and nonnational banks in the District of Columbia.

§ To avoid individual bank disclosure, figures are omitted for states where fewer than three national banks have trust accounts with investment responsibility.

△ Figure not available for Hawaii.

** Less than $500,000.

Current Legal and Regulatory Developments

During the first quarter of this year there were a number of significant developments in the laws and regulations affecting national banks and their operations.

I. *Lending Limits*

Several recent rulings relating to the lending limits of national banks were issued by the Comptroller of the Currency. The statutory limitation (contained in 12 U.S.C. 84) on the amount which a national bank may lend to a single borrower is 10 percent of the bank's capital and surplus (although there are thirteen statutory exceptions to this limitation which are applicable when the required safeguard or additional protective feature contained in the exception is present). The Comptroller has held that undivided profits which are in fact earned surplus may be considered as unimpaired surplus funds in computing the lending limit on loans to individual borrowers contained in 12 U.S.C. 84.[1]

The applicability and scope of exception 2 of this basic 10 percent lending limitation was the subject of another recent ruling of the Comptroller. Exception 2 (12 U.S.C. 84(2)), which relates to the discount of commercial and business paper, removes entirely the lending limit from negotiable paper given in payment of the purchase price of commodities purchased for resale or to be used in connection with the fabrication of a product, or to be used for any other business purpose which may reasonably be expected to provide funds for payment of the paper, and bearing the full recourse endorsement of an actual owner. In a recent ruling the Comptroller held that exception 2 may be applicable to the renewal of such paper when the renewal is consistent with these conditions. Previously, the renewal of such paper was regarded as removing the justification of exception 2 even though there was no default, the paper discounted and renewed was negotiable, and there continued to exist a business purpose which could reasonably be expected to provide funds for payment of

[1] As appeared in the March 1964 issue of *The National Banking Review*, 1, p. 425, the Comptroller has recently held that the proceeds of capital notes, capital debentures or other similar obligations issued by a national bank, which are subordinate in right of payment to the prior payment in full of all deposit liabilities of the bank, may be included as part of the aggregate amount of unimpaired capital stock and unimpaired surplus funds for the purpose of the computation of the limit on loans to individual borrowers contained in 12 U.S.C. 84. A discussion of other recent rulings relating to the use of capital notes and debentures appears in this issue of the *Review*, pp. 600-601.

the paper. Under this previous position, the renewal of such paper meant that only exception 4 (12 U.S.C. 84(4)) had application. That exception, which is applicable only to paper having a maturity of not more than six months, affords an additional lending limit of only 15 percent in addition to the basic limit of 10 percent of the bank's capital and surplus.

In other rulings the Comptroller has held that exception 7 (12 U.S.C. 84(7)), which relates to loans secured by livestock and dairy cattle, is applicable to loans secured by instruments transferring or securing title to fish and to turkeys. These rulings are but specific applications of the statutory exception on obligations which are secured by first liens on readily marketable livestock. Such livestock previously has been held to include dairy and beef cattle, hogs, sheep, goats, horses and mules.

In another ruling relating to a bank's lending limit, it was held that loans secured by Government Transportation Requests do not qualify under exception 8 of the lending limits statute (12 U.S.C. 84(8)) because they are not "certificates of indebtedness," or "obligations fully guaranteed both as to principal and interest by the United States." Similarly, they do not qualify under exception 10 of that statute (12 U.S.C. 84(10)) which requires a take-over commitment by an agency of the Federal Government. It was noted that these requests are claims against the Government which are subject to audit and disallowance in proper cases. Loans secured by claims are subject to the ten percent lending limit (of 12 U.S.C. 84), although these claims may be assigned by the carrier subject to the provisions of 31 U.S.C. 203.

II. *Borrowing Limits*

A ruling was issued relating to the borrowing limitations placed on national banks. It was held that indebtedness of a national bank's premises holding corporation need not be included in determining the bank's debt limitation under 12 U.S.C. 82, which provides in part that "no national banking association shall at any time be indebted or in any way liable" in excess of a designated amount. The statutory debt limitations were held inapplicable because the bank itself was not liable on the indebtedness of its affiliate which was a wholly-owned subsidiary corporation holding the bank premises.

In another ruling relating to the limitations (of 12 U.S.C. 82) on borrowing by a national bank, it was noted that bills payable to the Federal Reserve fall within a specific (fifth) exception of the statute, and that federal funds purchased and certain agreements to repurchase securities have previously been ruled by the Comptroller not to constitute borrowing transactions. It has been held that none of these three types of transactions need be considered indebtedness for the purposes of section 14.5(b) of the Comptroller's Regulation on Changes in Capital Structure. (12 C.F.R. 14.5(b)). That section provides that a national bank may not issue capital debentures or notes in an amount which, when added to already outstanding indebtedness of the bank, exceeds the limitation contained in 12 U.S.C. 82, i.e., 100% of capital stock plus 50% of surplus.

III. *Use of Capital Notes*

The Comptroller recently issued several rulings relating to the use of capital debentures and notes. Inasmuch as such notes and debentures issued by national banks must be subordinated to the claims of depositors and other creditors of the issuing bank, and are, therefore, capital instruments, it has been held that it would be inconsistent with the spirit and intent of 12 U.S.C. 83 for a national bank to make a loan secured by a pledge of its

own capital notes. Section 83 prohibits a national bank from extending a loan on the security of its own capital stock.

In another recent ruling relating to capital debentures and notes, the Comptroller held that capital notes represent capital for the purpose of various yardstick formulae appearing in certain statutes affecting national banks, including the minimum capital requirements for the establishment of branches (12 U.S.C. 36(c)); the limitation on the aggregate amount of a bank's real estate loans (12 U.S.C. 371); and the limitation on the aggregate amount of a bank's loans to affiliate corporations (12 U.S.C. 371c). But, in yet another ruling relating to the limitation on investment in bank premises, the Comptroller held that, in calculating whether his prior approval (under 12 U.S.C. 371d) is necessary, the amount of such outstanding notes may not be considered as "capital stock." However, it was stated in this ruling that the amount of capital funds represented by outstanding capital debentures or notes will be given due consideration by the Comptroller in considering requests for prior approval of excess investment in premises.

IV. *Bank Premises*

In addition to the immediately foregoing ruling which involved the use of capital debentures and notes, the Comptroller issued two other rulings in connection with bank premises. The first such ruling concerned investment in bank premises. Such investment is subject to the limitations contained in 12 U.S.C. 371d, which provides that such investment may not exceed the amount of the bank's capital stock except, in the case of national banks, with prior approval of the Comptroller. The Comptroller has announced that he will ordinarily approve an investment in bank premises aggregating in amount up to 50% of the bank's capital stock, surplus and undivided profits, where a reasonable need for such investment can be shown.

The second such ruling relates to ownership of one or more bank premises corporations by a national bank under 12 U.S.C. 371d. It has been held that a bank premises corporation may own bank furniture and equipment, including data processing equipment. It has also been held that a bank premises corporation which owns electronic data processing equipment leased to its national bank owner for operation by the bank is not a bank service corporation within the meaning of the Bank Service Corporation Act.

V. *Real Estate Loans*

A national bank may, under the provisions contained in the third paragraph of 12 U.S.C. 371, make construction loans which are not subject to the usual first lien security, improved real estate, and amortization requirements of the real estate loan requirements of that section 371. However, such construction loans must have maximum maturities of not more than eighteen months, and there must be a valid and binding agreement entered into by a financially responsible lender to advance the full amount of the bank's loan upon completion of the buildings. However, the Comptroller held that if a national bank, in extending interim credit to finance the construction of an industrial, commercial, residential or farm building, relies primarily for repayment of the loan on a commitment by a financially responsible lender to take up the loan upon the completion of construction, the loan is not a real estate loan and not subject to the limitations contained in the third paragraph of 12 U.S.C. 371.

It has also been held that in the case of several such loans, a blanket takeout commitment is sufficient as long as the

bank is able to establish the loans to which such commitment is applicable.

The Comptroller issued a ruling which relates to the merger of first and second liens on real estate. A national bank may hold a first and a second mortgage on qualifying real estate if there is no intervening lien and the aggregate of the amounts due on both mortgages and the terms of payment conform with the provisions of 12 U.S.C. 371, the statute applicable to real estate loans. In such a case, the combined mortgages will be regarded as merged into one qualifying first lien. In this connection, the Comptroller recently held that a lien which arises only upon the bank's election of its remedy under mortgage insurance or guaranty applicable to the first lien is not an intervening lien.

Two rulings were issued relating to demand and short-term real estate and construction loans. In one ruling it was held that a real estate loan, in an amount in excess of 50% but not more than 75% of the appraised value of the real estate security, may be made on a demand basis if provision is made whereby, in the absence of demand, the entire principal of the loan will be liquidated by regular payments of principal within a stated period of time not exceeding 20 years. In the other ruling it was held that loans made to finance the construction of industrial or commercial buildings, or of residential or farm properties, may come within the real estate lending statute (third paragraph of 12 U.S.C. 371), even though they are made payable on demand instead of having a stated maturity of not more than eighteen months, provided that the parties intend that the loan be paid off or refinanced within the eighteen-month period, and provided that demand is made or the loan paid within such period.

VI. *Key Man Insurance*

The Comptroller previously ruled that a national bank may purchase insurance for the benefit of the bank on the life of an officer whose death would be of such consequence to the bank as to give it an insurable interest in his life. In a recent ruling it was held that the amount of such insurance coverage must bear a direct relation to the bank's risk of loss of key personnel, and that under no circumstances may such an insurance policy represent a part of the bank's investment program.

VII. *Bank Service Corporations*

The Comptroller issued two rulings relating to bank service corporations. In the first ruling, it was held that nothing in either the Bank Service Corporation Act or its legislative history precludes banks from sharing in the ownership of the corporation with individuals or with corporations other than banks. In the second ruling, it was held that bank services, as defined by the Bank Service Corporation Act, include any service which a bank would ordinarily perform for a customer. Accordingly, if a bank undertakes to handle the payroll accounts or the accounts receivable of a customer, a bank service corporation may perform for the bank the services necessary to enable the bank to fulfill its undertaking.

VIII. *Insurance Premium Financing*

The Comptroller ruled that no illegal banking activity is conducted where a bank makes auto financing loans to customers of an insurance company, even though the company's agents advertise that they can assist their policy holders in obtaining auto financing by direct loans from the bank covering all or part of the

car purchase price plus cost of insurance. In the ruling it was noted that neither the insurance company or its agents receive either direct or indirect compensation in connection with this financing. It was further noted that no firm arrangement was in effect between the bank and the insurance company under which the bank was bound to accept loan applications of customers tendered through representatives of the insurance company, the bank was free to discontinue acceptance of the paper at any time, and the insurance company was free to send the paper elsewhere. In addition, the insurance company representatives were not acting as agents for the bank, and the bank, which was in no way bound to honor the drafts, could refuse to pay such drafts prior to receipt of the evidence of debt and other relevant documents.

IX. *Banking Hours*

In a published ruling involving the determination by a bank of the hours during which it is open for business, the Comptroller ruled that agreements, arrangements, undertakings, or understandings among banks, through clearing houses or otherwise, concerning hours or days when such banks may be open for business, are not permissible in any form. In this ruling the Comptroller stated that, wherever a bank has been involved in any of the practices proscribed, the board of directors of the bank should review its banking hours independently of any other bank and take appropriate action to establish independently a schedule of banking hours. In taking this action, the Comptroller stated, it is appropriate to make such changes in the schedule of banking hours as are deemed necessary or desirable in the light of the individual bank's costs and competitive position.

In another ruling relating to banking hours, it was held that national banks and banks located in the District of Columbia may lawfully remain closed on legal holidays and on such days as are designated by the Comptroller of the Currency.

X. *Inspection of Bank Records*

The inspection of the books and records of a national bank was the subject of another ruling. National banks were reminded that representatives of a state or local government have no right to conduct examinations or to inspect or require the production of books or records of national banks. The ruling noted that a state department or bureau of labor desiring to verify a national bank's payroll records for unemployment compensation purposes must follow certain statutory rules prescribed in the United States Code (26 U.S.C. 3305(c)).

In two other rulings, national banks were again warned that the report of examination made by an examiner selected by the Comptroller is designed for use in the supervision of the bank, and that under no circumstances may officers or employees disclose or make the report or any portion thereof public in any manner. In one ruling, it was held that such report of examination may not be made available to other banking institutions in connection with proposed transactions such as mergers and consolidations. In the other ruling, it was held that such report of examination may not be made available to a clearing house association. However, this ruling further stated that the Comptroller had no objection to the voluntary disclosure by a bank of information concerning its affairs to such association, where such disclosure is through reports prepared by the bank or by others at the request of the bank.[2]

[2] Discussion of a related ruling in connection with the statutory prohibition of an examination of a national bank's trust department by state banking authorities appears in this issue of the *Review* on pp. 610-611.

XI. *Record Date for Shareholders*

A recent ruling was issued in connection with the simplification of the work of a national bank with respect to voting at shareholder meetings. It was previously held that the stock records of a national bank may be closed for a reasonable period to ascertain shareholders for voting purposes. As an alternative, the bank may fix a record date for determining the shareholders entitled to notice of and to vote at any meeting of shareholders. In this connection, the Comptroller ruled that such record date should be in reasonable proximity to the date of giving notice to the shareholders of such meeting.

XII. *Compensation by Bank*

The provisions of a criminal statute, 18 U.S.C. 215, prohibit an officer, director, employee, agent, or attorney of a national bank from receiving or agreeing to receive anything of value from anyone other than the bank in consideration for efforts on behalf of a customer or prospective customer of the bank. It was held by the Comptroller that this statutory prohibition was not intended to prevent the bank from paying a commission to a director, officer, or employee for services rendered in connection with the procurement, preparation, or servicing of a loan.

XIII. *International Operations*

The Comptroller issued a request that every national bank, upon engaging in any of certain defined international operations, forward to his office information reports concerning such operations within 30 days of the occurrence thereof. The international operations to be reported include (1) the establishment or relocation of a branch of a national bank in a foreign country, dependency or insular possession of the United States; (2) the acquisition by a national bank of stock in a foreign banking corporation; (3) the establishment or relocation, by a foreign banking corporation controlled by a national bank, of any branch or agency in the United States or abroad; and (4) the acquisition by a national bank, through a foreign banking corporation controlled by that bank, of controlling stock interest in a foreign corporation or association (including a foreign bank).

The request stated that for the purposes of reporting international operations, a foreign banking corporation is: any bank or corporation chartered or incorporated under the laws of the United States or of any state thereof, including any corporation organized under 12 U.S.C., sec. 611 to 632, which is principally engaged in international foreign banking or financing, or banking in a dependency or insular possession of the United States, either directly or through the agency, ownership or control of local institutions in foreign countries, or in such dependencies or insular possessions; or any corporation or other association, organized under the laws of a foreign country or a dependency or insular possession of the United States, which is principally engaged in a commercial banking business. This request, it was stated, was not intended to apply to past transactions or to existing corporate relationships.

XIV. *Trust Rulings*

The Comptroller issued a number of rulings relating to the organization, administration and operation of the trust departments of national banks.

He ruled that it is permissible to appoint any person not employed by the bank to serve as a member of a trust

department committee, provided that he is designated in such capacity by resolution of the board of directors. Although statements of condition and advertising media may list such person as a member of a committee, if he is to be an advisory member only his name should be so identified on any published list of committee membership.

The Comptroller's Regulation 9.7(a) places the responsibility for the supervision of fiduciary activities on the board of directors. The board may not delegate its duties, but may assign their performance to directors, officers, employees, or committees, as it may choose. The assignments should be incorporated in the bylaws of the bank or be established by resolution of the board of directors. In keeping with the foregoing, the Comptroller held that, wherever bylaws or resolutions are brief in detail as to the administration of the bank's fiduciary powers, the Comptroller's Office through its Representatives in Trust will make a determination as to whether the responsibilities of the board and the functions assigned by it are being properly administered. Each board should make an annual reassessment of trust department organization and administration. Whenever the organization and administration of the trust department are inconsistent with procedures set forth in the bylaws or board resolutions, appropriate amendments should be adopted. The Comptroller also held that, where the board assigns functions to individuals or committees, it must thereafter take such action as is necessary to inform itself concerning the manner in which such assignments are performed. While it is not necessary for the board to review all written records and formally approve every action taken by the individuals or committees assigned such functions, such records should be available for the board's inspection.

In a recent ruling the Comptroller held that, where the Representative in Trusts determines during the course of an examination that the internal audit controls are adequate and that the flow of securities into and out of a trust department of a national bank is satisfactorily under the control of auditors responsible to the examining committee or to the board of directors of the bank, a verification of trust department assets once in each period of three calendar years will comply with the requirements of section 9.9 of Regulation 9.

Although section 9.9 of the Comptroller's regulation prohibits active officers of a bank from serving as members of the director's examining committee, he has ruled that that committee may utilize any person, including auditors of the bank, public accountants, attorneys or bank officers or employees to assist it, if it so desires. It was stated in the ruling, however, that in no case should a person so assisting a committee participate in the review of his own work or that of the department for which he is responsible.

The Comptroller ruled that employment of an outside corporation to perform trust department bookkeeping functions is permitted, provided that there is compliance with the terms of section 9.8(a) of the regulation which relates to retention of fiduciary records and making such records available to the Comptroller of the Currency. The ruling also provided that the bank must photostat the source documents or original entry media before sending such information for posting. The trust department must also maintain its own trust department general ledger. This ruling relates to section 9.8(a) of Regulation 9 which provides: ". . . The fiduciary records shall contain full information relative to each account."

It has been held by the Comptroller that, where the bank is serving as registrar and transfer agent for the same issue of stock, it will not be necessary for the bank as registrar to maintain a record of

the number of each certificate as this must be done by the bank as transfer agent.

In a ruling relating to the question of whether a provision in the governing instrument absolving the trustee from liability in successor fiduciary accounts is sufficient, or whether additional evidence is necessary in order properly to protect the trustee from liability arising out of the administration of the predecessor, the Comptroller held that presence of such a provision should not preclude an investigation prior to the acceptance of the account. He further held that it should be appropriate as a minimum program to examine the portfolio in complete detail and take steps to have unsound or improperly acquired assets removed. However, the form of record that this investigation was conducted is left to the discretion of the bank as long as it indicates that an investigation was made, and by whom.

In another ruling, it was noted that section 9.10(b) of Regulation 9 provides that a national bank may, unless prohibited by the instrument creating the trust or by local law, use trust funds in the conduct of the bank's business provided that it shall set aside qualifying assets as collateral security. This section also states "the requirements of this section are met when qualifying assets of the bank are pledged to secure a deposit in compliance with local law, and no duplicate pledge shall be required in such case." It was held in this ruling that securities deposited with state authorities for the protection of private and court trusts as provided in section 9.14 do not qualify under section 9.10(b) of the regulation as pledges "to secure a deposit in compliance with local law." The security called for by these two sections serves dissimilar purposes. However, it was also noted that in some jurisdictions, state and political subdivisions or agencies must, upon the deposit of funds with a national bank, receive security. If a national bank receives such funds in its capacity as fiduciary and in turn delivers securities to the governmental agency, the requirements of section 9.10(b) will be met and no other collateral need be earmarked to secure such funds. In this connection, in order to eliminate the possibility of a double pledge, it has also been held that, where securities so delivered to a governmental agency qualify under 9.10(b), the resolution of the board of directors of the bank should specifically state that the funds of the particular account do not participate in the general pledge of assets.

The Comptroller recently issued a ruling involving a proposed arrangement of a bank whereby its investment department would make continuous reviews and recommendations as to the holdings in a customer's portfolio, and arrive at an investment and general policy to be applied to each account even though the bank's function would be purely advisory. Absolute discretion regarding changes to be made in the portfolio would remain in the customer, who would direct the bank to take all actions relating to the account. A fee would be charged by the bank for this service to be computed at regular intervals as a percentage (on a sliding scale) of the market value of the portfolio at the end of each period. Included in the services made available to the customer for this fee would be the safekeeping of the securities in the customer's portfolio and other custodian services, all of which would be performed by the bank's trust department in the usual case. It was noted that this arrangement would involve the bank's acting in an agency capacity. Although investment discretion would not be conferred upon the bank, nonetheless a substantial degree of fiduciary responsibility would be imposed upon it. It was therefore ruled that, in providing this service to its customers, the bank would be acting in such a fiduciary capacity as to require that this

service might be performed only by banks with trust powers and in the trust department, subject to trust regulations and examinations. However, inasmuch as Regulation 9 provides in section 9.7(d) that the trust department may utilize personnel and facilities of other departments of the bank as long as the separate identity of the trust department is preserved, it was further held that such services should be performed by the trust department, and that department in providing the services called for might draw upon the bank's investment department for assistance in providing the investment advice.

The Comptroller has indicated that where a fiduciary is subject to the instructions of a holder of a power to direct investments, the bank may nonetheless possess investment responsibility in practical effect. Where a power to direct is held in a fiduciary capacity, as when the beneficiary is someone other than the holder of the power, the trustee is not justified in complying with directions if he knows, or ought to know, that the holder of the power is violating his duty to the beneficiary in giving such directions. The trustee in such instances may not properly take the position that the responsibility is wholly that of the holder of the power. Accordingly, the Comptroller has ruled that a bank trustee should review such accounts except where specifically relieved from such responsibility by the terms of the instrument or by court order or local law.

The Comptroller has also ruled that if agency accounts confer investment discretion on a bank, thus becoming "managing agency" accounts as that term is defined in Regulation 9, such accounts must be reviewed pursuant to section 9.7(a)(2). A bank exercises investment responsibility within the meaning of the foregoing ruling in those agency accounts which have been supplemented by instructions effectively conveying this power to the bank. Even where a bank provides only investment advice to the principal in the form of recommendations for subsequent approval or disapproval, it is desirable that the assets of such accounts be reviewed periodically.

In another ruling it was held that trust funds may be deposited in the savings department of a bank while awaiting investment or distribution unless prohibited by the instrument creating the trust, as long as such deposits are secured as provided in section 9.10(b) of Regulation 9. However, the investment of trust funds in savings accounts would violate section 9.12(a) unless lawfully authorized by the governing instrument, court order, or local law. In the same ruling it was noted that there are circumstances surrounding the placement of trust funds awaiting investment in the savings department which may justify such deposits continuing for an extensive period—even longer than a year.

In a related ruling, it was held that trust funds of a bank deposited in its savings department while awaiting investment or distribution, which are in excess of FDIC insurance coverage, must be secured by a pledge of qualifying assets under section 9.10(b). However, it was noted that funds of agency accounts which involve no acts of discretion on the part of the bank may not be secured by pledge of assets when such funds are deposited in its commercial or savings department. Similarly, trust funds placed as an investment in the savings department where lawfully authorized by the instrument or by court order or local law may not be secured by assets of the bank.

In a ruling concerning the propriety of the retention of the stock of a fiduciary bank or its affiliates in trust department accounts, it was held that the stock of the bank or its affiliates may be retained in fiduciary accounts only where lawfully authorized by the instrument creating the relationship or by court order or by

local law. However, the ruling stated that holdings which are otherwise properly authorized may nonetheless be criticized by the Comptroller's office where it appears that the amount of such holdings is excessive, or the retention is otherwise inappropriate.

In a ruling which noted that it is not permissible for a national bank to make real estate mortgage loans and subsequently sell them to various accounts in its trust department, even though the loans are earmarked at inception for this ultimate purpose, it was held by the Comptroller that a national bank may invest fiduciary funds in a real estate loan where the bank itself has provided the construction financing. A firm commitment for one or more named trusts to take over the permanent financing must be made when the construction loan is made, or prior thereto.

The Comptroller issued a ruling relating to the effectiveness of a provision in an instrument vesting a power in the *office* of the president of a national bank, rather than in a named individual, to vote shares of stock of the bank. It was held that, assuming that this may be effectively done under local law, it would be permissible under the national banking laws to establish a trust with a bank as trustee, and with a power in the president of the bank to direct the manner in which shares of the stock of the bank held in trust are to be voted in all matters except the election of directors of that bank. It was further held that there would be no objection under the national banking laws to the appointment of another bank as trustee with this power of direction in the president of the subject bank. In the event that this latter course is pursued, the holder of the power could direct how the shares are to be voted even in the case of the election of directors of his bank.

It has been held that, in order to conform to Regulation 9, Plans for collective investment funds must include all provisions which are specified in section 9.18 (b). To satisfy these requirements, Plans must, among other things, provide a specific period for valuation of assets of a collective investment fund. A "reasonable period" or similar language will not suffice. The Plan must set forth in detail the actual valuation criteria of all fund assets. It has therefore been held that provisions stating that values will be determined in accordance with "methods consistently followed and uniformly applied," or "whatever method the trustee deems proper and appropriate" do not meet this test. In this connection, some banks have incorporated in Plans for collective investment funds provisions that, anything in the Plan to the contrary notwithstanding, the fund will be operated in conformity with the requirements of Regulation 9. The Comptroller has stated that, while it may thus be possible to negate effectively the provisions of a Plan which are in conflict with the regulation, he is of the opinion that in order to avoid the possibility of misunderstanding, it is preferable that all provisions of a Plan which are in conflict with Regulation 9 be amended to conform.

In another ruling, it was noted that most Plans for the collective investment of retirement, pension, profit sharing, stock bonus, or other employee benefit trusts which are exempt from Federal income taxation under the provisions of the Internal Revenue Code are collective investment funds within the meaning of section 9.18(a)(2) of Regulation 9, and must conform to the requirements applicable thereto. It was held that this includes most of such collective trusts which were permitted under the provisions of section 206.10(c) of former Regulation F. Such trusts are not within the contemplation of section 9.18(c)(4), which permits collective investment "in any investment . . . authorized by the instrument creating the fiduciary relation-

ship." This latter paragraph covers only trusts established by the same or closely related settlors. Section 9.18(c)(4) does not include trusts established by a number of members of an industry, trade or profession, for example, and such collective trusts must conform to the requirements of section 9.18(b).

Another recent ruling relates to section 9.18(b)(11) which provides for the establishment of a reserve account from the income of mortgages held in a collective investment fund. It was held that this account cannot be used to absorb principal losses; only income in default may be charged to it. It was further held that in cases of default of principal for other than justifiable reasons for any extended period of time, the bank should either segregate the mortgage or sell it. The provisions of 9.18(b)(8)(ii) authorize the purchase of such mortgages in certain circumstances. No other type of reserve may be established. For example, a bank may not set up a reserve for all realized gains and losses.

Although a bank may not establish a Mortgage Investment Fund such as was formerly permitted under Regulation F, it has been held that it is permissible to operate a collective investment fund under 9.18(a)(1), the assets of which consist solely of mortgages. While it is required that 40% of the value of the assets of a fund must be composed of cash and readily-marketable investments, the Comptroller has ruled that FHA and VA mortgages are "readily marketable" within the meaning of that requirement. Therefore, it would be possible to operate a fund subject to the requirements of the existing regulation with 40% of the assets consisting of FHA and VA mortgages and the remainder composed of conventional mortgages.

The Comptroller has ruled that banks operating pension and profit sharing trusts may simplify the handling of certificates of ownership of securities held by these funds in certain circumstances where the instrument so provides or such authorities exist in local law. In such cases, it is permissible for banks to keep the certificates representing all of the shares of stock of each issuer and all of the registered bonds of each issuer in a separate folder. These certificates should be registered in the names of nominees used only by the pension trust, or in the name of the bank as trustee. The shares and bonds may thus be consolidated into a few certificates of very large denominations with only a very small amount of certificates of small denominations kept for trading purposes. In cases of purchases or sales of the investments of pension and profit sharing trusts, the securities purchased would not have to be broken into separate certificates and placed in separate folders for each trust, as is presently the case in many banks. The result is that the certificates representing all of the stock or bonds of a particular issuer will be consolidated and held in one place without identification of the particular funds for whose account such securities are held. The bookkeeping division of each trust department which utilizes this system must maintain records from which the breakdown of ownership of the shares of any particular issue may at all times be readily ascertained. These records would have to be in balance at all times, with appropriate record maintained of securities in the process of purchase or sale. Also, a bank utilizing this system must, in addition to present audit and control procedures, employ an outside audit or to conduct an annual surprise audit of all of the securities held. This auditor would make physical count of the securities and compare the totals with the bookkeeping records. On completion of the audit, the bank must be furnished with a certificate of that audit, and a copy must be made available to each customer.

The Comptroller has also ruled that,

while participations in collective investment funds operated under section 9.18(a) (2) may be purchased in kind with securities or other assets by eligible trusts, participations in funds operated under 9.18(a)(1) and (a)(3) may be purchased for eligible fiduciary accounts only with cash, with the exception that participations in these funds may also be purchased with certain nonmarketable government obligations.

In another ruling, the Comptroller held that it is permissible, under section 9.12 (a), where fair to both accounts, to sell marketable assets of high quality to a collective investment fund for cash. If it is also desired to obtain participations in that fund for the selling account, they may be obtained, of course, with cash at the next valuation date. However, there must be two distinct and valid transactions.

In another ruling, it was pointed out that Regulation 9, at section 9.18(c)(3), provides a means of collective investment for banks having a small number of fiduciary accounts which are for the most part composed of small amounts of assets. In such circumstances, compliance with the numerous requirements of section 9.18(b) of the regulation would make the operation of such funds infeasible, and for that reason these funds are not subjected to such requirements. However, the Comptroller reminded that this justification for operation under this section is inconsistent with the expenditure of moneys for advertising, and, therefore, all advertising of such funds other than incidental reference thereto in advertisements of fiduciary services generally is prohibited. In addition, the Comptroller ruled that the justification for utilization of this means of collective investment disappears where there are a significant number of participations, or where there are participations of substantial size. Accordingly, banks were advised that such funds should be frequently re-examined to determine whether these justifications no longer exist and compliance with section 9.18(b) in full is required.

The Comptroller has previously held that certain expenses of administration and operation of collective investment funds may be charged to the principal or income account.[3] In a recent ruling the Comptroller has held that the principal or income account may be charged for the cost of court accountings where such are required by law.[4]

Many national banks presently have a limited grant of fiduciary powers under permits issued by the Board of Governors of the Federal Reserve System or by the Comptroller of the Currency. Such national banks are now deemed by the Comptroller to be possessed of all fiduciary powers which are not in contravention of the laws of the state where located. The Comptroller has also held that a national bank authorized to exercise fiduciary powers may, without additional authority from him, exercise such power in other jurisdictions, the laws of which do not exclude nonresident fiduciaries. Accordingly, a national bank with fiduciary powers may exercise them in another state or country if the bank conforms to the laws of that jurisdiction.

In another ruling of the Comptroller of the Currency, banks were again reminded

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[3] *The National Banking Review*, 1, March 1964, p. 430.

[4] An earlier ruling of the Comptroller also held that expenses that may not be charged against the fund but shall be absorbed by the bank are: (1) the cost of establishing or reorganizing a collective investment fund; (2) the cost of printing, publishing and distributing the full financial report and the publication of the summarized financial report; and (3) all other costs incurred in the operation and administration of a collective investment fund, except those specifically described in the foregoing text. However, the Comptroller has more recently held that other costs incurred in the operation and administration of a collective investment fund may be charged to the fund upon his prior approval. See *The National Banking Review*, 1, March 1964, p. 430.

that state banking authorities are totally without any authority to examine trust departments of national banks. It was noted that in addition to several decisions of the United States Supreme Court which recognize this position, section 92a(c) of Title 12 of the United States Code specifically provides, in part, that ". . . the state banking authorities may have access to reports of examination made by the Comptroller of the Currency insofar as such reports relate to the trust department of such bank, but nothing in this section shall be construed as authorizing the state banking authorities to examine the books, records and assets of such bank."

The Internal Revenue Service has issued a tax ruling permitting the collective investment of certain managing agency accounts by banks. The ruling applies only to certain accounts which qualify as managing agencies under the Comptroller's Regulation 9 and that regulation has been amended to reflect this fact. In order for a managing agency contract to comply with the amended regulation, its language must recite that the monies of the account are received by the bank "in trust." When these words appear in a managing agency contract, it may be collectively invested in a fund for such accounts, and the fund will receive tax treatment under section 584 of the Internal Revenue Code.

XV. *Litigation Involving Decisions of the Comptroller*

The *issuance of a branch certificate* by the Comptroller has been contested in several recently filed cases. In one action, two state banks are seeking a judgment that (1) the Comptroller's approval of the intervenor bank's branch application was invalid in that the intervenor did not have sufficient capital at the time the application was filed, and (2) the plaintiff's are entitled to a hearing and adjudication under the Administrative Procedure Act. Plaintiffs ask therefore that the Court enjoin the Comptroller from issuing a branch certificate. *The Farmers Bank and Trust Company and Richmond County Bank* v. *James J. Saxon and Southern National Bank of North Carolina, Intervenor.* Civil Action No. 16-R-64 (D.C.M.D.N.C.). In a second such action a national bank is seeking a declaratory judgment that approval by the Comptroller to defendant bank to establish a branch was illegal. It also seeks a permanent injunction restraining the Comptroller from issuing such certificate. The only issue raised by the complaint is whether the comptroller was arbitrary, capricious, abused his discretion or otherwise acted illegally in finding that the disputed branch will be located in a village separate from plaintiff bank's village. *Manufacturers National Bank of Detroit* v. *James J. Saxon and Community National Bank of Pontiac,* Civil Action No. 25172. (D.C.E.D. Mich.).

A third action involves a state bank which is seeking an injunction to restrain the Comptroller from approving an application for a branch. Plaintiff raises the question of whether a full public hearing under the Administrative Procedure Act is legally required of the Comptroller. *Peoples Bank and Trust Company* v. *James J. Saxon,* Civil Action No. 867, (D.C.E.D.N.C.). In a fourth action, a state banking superintendent seeks a judgment declaring that a proposed drive-in facility of defendant is contrary to the applicable branch banking laws. Plaintiff seeks an order restraining defendant from operating this facility, which was authorized by the Comptroller as an extension of its main bank office. The defendant bank contends that the facility is not a separate branch within the meaning of the law, such as either requires a separate branch certificate or is prohibited by the location restrictions of the branching laws. *W. M. Jackson, Superintendent of*

Banks of The State of Georgia v. *First National Bank of Valdosta*, Civil Action No. 647 (D.C.M.D. Ga.).

Litigation over the Comptroller's proposed issuance of a branch certificate has resulted in a judgment for the Comptroller and the national bank seeking to establish the new branch. The only issue raised by the complaint and at the time of trial was whether the Comptroller abused his discretion in finding that the contested branch would be in a village separate and distinct from the village in which was located a branch of the plaintiff bank. *Manufacturers National Bank of Detroit* v. *James J. Saxon, Comptroller of the Currency, and Michigan Bank, N.A.*, Civil Action No. 2460 (D.C.E.D. Mich.).[5]

In another case, petitions for a writ of certiorari to the United States Court of Appeals for the District of Columbia Circuit have been granted by the United States Supreme Court. The petitions had been filed by the Comptroller and a national bank, the chartering and establishment of which was held to have been in violation of the applicable branching laws. *Whitney National Bank* v. *Bank of New Orleans and Trust Company et al., and James J. Saxon* v. *Bank of New Orleans and Trust Company et al.*, 323 F. 2d 290 (D.C. Cir. 1963).[6]

The United States Supreme Court has held a bank *merger*, previously approved by the Comptroller of the Currency and sustained by a United States District Court,[7] to be a violation of Section 1 of the Sherman Act. This holding was based on the Court's finding that the merger involved the elimination of significant competition between the merging companies which were major competitive factors in a relevant market. The Court did not reach the question of whether there was a violation of Section 2 of the Sherman Act. *U.S.* v. *National Bank of Lexington*, No. 36, October Term, 1963 (1964).

In a case[8] relating to the foregoing merger, a shareholder of one of the participating banks contended that the merger was illegal because the necessary margin of votes of stock of that bank authorizing the merger was possible only by the bank's voting of its own stock, which it held in a fiduciary capacity for various estates and trusts. Judgment was entered in favor of the bank. The court held that the stock in question was held by the bank in its fiduciary capacity and did not constitute any part of its corporate estate. *Graves* v. *Security Trust Company*, 369 S.W. 2d 114 (Ky. 1963).

A law suit was dismissed against a national bank which was a successor to certain checking accounts of a now closed national bank. Although the latter bank had extended these accounts on a lifetime *free* of *service charge* basis, the court held that the successor national bank was under no obligation to continue such accounts free of service charges. The sale of assets to and assumption of liabilities by the successor bank occurred after the Comptroller of the Currency had terminated the conservatorship of the other bank under 12 U.S.C. 205 on certain prescribed terms, conditions, restrictions and limitations, one of which was the cancellation of all deposit contracts which provided for checking accounts free of service charges. *Roger Goodhead, in person and for all persons similarly situated* v. *Southern Hills National Bank, etc., et al.,*

[5] This case was originally reported in *The National Banking Review*, 1, March 1964, p. 430.

[6] *The National Banking Review*, 1, March 1964, p. 433, and September 1963, p. 143.

[7] *United States* v. *First Nat. Bank & Trust Co. of Lexington*, 209 F. Supp. 457 (E.D. Ky. 1962), discussed in *The National Banking Review*, 1, September 1963, pp. 141 and 142.

[8] Other private litigation which failed to set aside this merger, *Security Trust Company* v. *Dabney*, 372 S.W. 2d 401 (Ky. 1963), was discussed in *The National Banking Review*, 1, March 1964, pp. 433 and 434.

Cause No. 106897, Dist. Ct., Tulsa County, State of Oklahoma.

Another suit filed following the termination of the foregoing conservatorship was an action brought by several shareholders of the bank which had extended the checking accounts on a lifetime free of service charge basis. That bank and its directors were sued for violation of certain provisions of the National Bank Laws, actions of gross misfeasance, nonfeasance, and gross negligence, and for actions which caused the bank to be placed in conservatorship[9] by the Comptroller of the Currency. *Babb H. Edmonds et al.* v. *R. R. Henshaw et al.*, Dist. Ct., Tulsa County, State of Oklahoma.

A recent decision of the United States Court of Appeals for the Fourth Circuit involved liability for *stock transfer stamps* following the consolidation of a national bank and a state bank under the charter of the former pursuant to the prior approval of the Comptroller of the Currency. That Court, reversing a contrary holding of the district court, held that "original issue and transfer tax stamps are required as a result of such mergers or consolidation." *Fidelity-Baltimore National Bank* v. *United States*, 328 F.2d 953 (4 Cir. 1964).[10]

XVI. *Other Litigation*

In a proceeding by a *bank holding company* for review of the Federal Reserve Board's denial of its application for approval of a proposed acquisition of 80% or more of the voting shares of two state banks, the Court of Appeals for the Seventh Circuit held that the evidence supported the findings of the Board that future management problems confronting the state banks were not insurmountable and that future prospects of the state banks were satisfactory. The Court of Appeals noted that its duty, under the Bank Holding Company Act of 1956 (12 U.S.C. 1841-1848), is to determine whether ultimate findings of the Federal Reserve Board have subtantial support in the record, and in discharging that duty the reviewing court does not act as a super agency substituting its judgment for that of the Board. The Court further noted that, on review of orders of the Federal Reserve Board, the test is not whether the Board's findings are those that the Court of Appeals might have made *de novo;* rather it is whether the Board's ultimate findings and conclusions could have reasonably been drawn from primary evidentiary facts, or whether they are arbitrary or capricious. *First Wisconsin Bankshares Corp.* v. *Board of Governors*, 325 F.2d 946 (7 Cir. 1963).

In a similar proceeding by another bank holding company for review of the Federal Reserve Board's denial of its application for approval of a proposed acquisition of 80% or more of the voting shares of a state bank, the same Court of Appeals held that the evidence supported the Board's finding that such acquisition would be inimical to the preservation of competition in the field of banking and contrary to the public interest. In this case the Court noted that excessive concentration of control in a few bank holding companies in a state is itself a danger to banking competition, and that the test of a competitive banking market is not only whether small competitors prosper but also whether consumers are adequately served. *Marine Corporation* v. *Board of Governors of*

[9] Another action arising out of this conservatorship was brought against the conservator appointed by the Comptroller. A discussion of this case, *S. Paul Hazen* v. *Southern Hills National Bank of Tulsa and William H. Greenfield, Conservator of Southern Hills National Bank*, Civil Action 5842 (D.C.N.D. Okla.), appeared in *The National Banking Review*, 1, March 1964, p. 433.

[10] A discussion of the District Court's opinion, reported at 213 F. Supp. 631 (D. Ind. 1963), appeared in *The National Banking Review*, 1, December 1963, p. 272.

Fed. Res. Sys., 325 F.2d 960 (7 Cir. 1963).

In another action for a declaratory judgment, a state supreme court held that the rule of the state banking commission which prohibited the establishment of a *branch bank* more than 50 miles from the bank's main office was invalid as an unlawful attempt by the commission to exercise legislative power. *Livestock State Bank* v. *State Banking Commission*, 127 N.W. 2d 139 (S. Dakota 1964). This same rule is in issue in an appeal before the Eighth Circuit which was temporarily stayed pending this decision of the state supreme court. The appeal before the Eighth Circuit is from a district court decision[11] that a merger of three state banks into a national bank and the operation of the three state banks as branches of the national bank was in accordance with applicable branching laws and the Bank Holding Company Act of 1956, 12 U.S.C. 1841-1848.

In an action brought to set aside the granting of a *new state bank charter*, the plaintiff national bank contended, alternatively, that it was entitled to a *de novo* trial of the issues determined by the state banking board based on the preponderance of the evidence, and that certain of the board's determinations were not supported by substantial evidence. The state court of appeals, which noted that it was not the court's prerogative to substitute its judgment for that of the banking board where the evidence admitted before the court preponderates against the administrative decision, and that the test is whether the board's action finds reasonable support in substantial evidence, supported the board's order for issuance of a charter to a proposed bank which would be located in a city area having phenomonal growth and a general class of residents whose mean annual incomes were 3 to 4 times the average annual mean income of the city as a whole. The court stated that evidence pertinent in showing the necessity for the proposed bank included such matters as: extensive new freeways servicing the area in which the proposed bank would be located, along with other newly completed feeder arteries which could facilitate further development of the area and result in a change in the entire character of the area; and the enthusiasm with which the proposed stock offering was met and the promptness with which it was subscribed, coupled with the financial standing and proven abilities of directors and principal stockholders of the proposed bank. The court also held that the mere sufficiency of existing banking facilities, in the sense of some facilities more or less appropriately located in the area and furnishing the usual gamut of services, is not in and of itself sufficient basis to deny establishment of a proposed bank where the general economy of the area and its reasonable potential are such that there is room for further installation without causing excessive competition with real harm to any nearby banks now existing or unduly affecting the banking structure at large. *Chimney Rock Nat. Bank of Houston* v. *State Bank Bd.*, 376 S.W. 2d 595 (Tex. 1964).

In an action to enjoin the director of financial institutions from issuing a permit to organize proposed banks and to enjoin a bank, its officers, agents, and employees from taking further steps to obtain a permit, a state appellate court held that the state Banking Act did not prohibit stockholders, officers, directors, or employees of a bank, as individuals, from joining with other individuals in making application for permit to organize another state bank, and that prior to the establishment of a proposed bank, the

[11] *State of South Dakota* v. *National Bank of South Dakota*, 219 F. Supp. 842 (D. S. Dakota 1963) was discussed in *The National Banking Review*, 1, September 1963, p. 143 and March 1964, p. 433.

sale of stock therein, the report of organization of the bank, and the naming of their directors and officers, no actual controversy existed as to whether establishment of the bank would result in violation of a banking law prohibition against branch banking. *Northtown Bank of Decatur v. Becker,* 195 N.E. 2d 404 (Ill. 1964).

In a declaratory judgment action brought by a state bank which sought to have declared illegal and void an order of the state bank commissioner granting another state bank the right to establish a branch bank in the city in which the defendant bank and a branch of the plaintiff bank were located, a state supreme court held that a bank which was the only unit bank in the city could not under the state branch statute establish a branch in that same city. The branching bank unsuccessfully contended that the statute, which provided, in part, that "no branch bank shall be established in any city or town in which is located a bank or banks, state or national . . ." was not intended to protect a bank from its own competition where it, as the only bank in the city, wished to establish a branch of its own in the same city. *Walker Bank & Trust Company* v. *Taylor,* 390 P. 2d 592 (Utah 1964).

In a suit for specific performance of an *option agreement to purchase shares* of national bank stock, it was held that federal law was not controlling and that no act of Congress or decision of a federal court was applicable in what was a private dispute involving right of ownership of 30 shares of national bank stock. The Court held that nothing in its decision based on contract law interfered with the purposes of the creation of national banks, tended to impair or destroy their efficiency as a federal agency, or conflicted with the paramount law of the United States. *Smith* v. *Stowell,* 125 N.W. 2d 795 (Iowa 1964).

A judgment was entered against a mortgagee national bank in an action by mortgagor based on *fraud* where the bank had impliedly indicated that it had obtained fire insurance and failed to obtain such insurance on improvements on mortgaged property which were thereafter destroyed by fire. The court rejected the bank's defense that it was excused because its promise to obtain such insurance was *ultra vires* under its corporate charter. *First National Bank of Auburn* v. *Dowdell,* 157 So. 2d (Ala. 1963).

XVII. *Proposed Legislation*

In addition to legislation discussed in the December 1963 and March 1964 issues of the *Review,*[12] a number of other bills have been introduced in the eighty-eighth Congress which are of special interest to national banks and to financial institutions generally. There follows a summary of the purposes of certain of these bills:

1. prohibit national banks, all District of Columbia banks, and state chartered banks which are members of the Federal Reserve System or the Federal Deposit Insurance Corporation from performing any clerical, administrative, bookkeeping, statistical, accounting, or other similar services for their depositors, borrowers, or other customers, except to the extent that such services are a necessary incident to the proper discharge of lawful functions of such banks as depository, lender, trustee, or agent (H.R. 9548);

2. amend section 8 of the Clayton Act with respect to interlocking relationships between financial institutions, so as to prohibit a private banker, director, officer, agent, trustee, employee, or individual owner of a substantial beneficial interest in the stock or shares of any bank, banking association, savings bank, trust company, or savings and loan association subject to Federal regula-

[12] *The National Banking Review,* 1, December 1963, pp. 273-277; and March 1964, pp. 437-438.

tion from at the same time being a director, officer, agent, trustee, employee or individual owner of a substantial beneficial interest in the stock or shares of any other bank, banking association, savings bank, trust company, or savings and loan association, or any branch thereof (H.R. 10506);

3. liberalize the conditions under which national banks may make real estate loans secured by first liens upon forest tracts (S. 2259);[13]

4. authorize national banks to make certain development loans (H.R. 10007);

5. extend the definition of "company" contained in section 2(b) of the Bank Holding Company Act of 1956 to include, in part, certain testamentary trusts, business trusts and corporations which control bank assets of $100,000,000 or more (S. 2561, H.R. 10668, H.R. 10749);

6. extend applicability of the Bank Holding Company Act of 1956 to corporations which own 25% or more of the stock of a single bank or which control by certain other methods a single bank (H.R. 10872);

7. change the composition of and duration of appointment to the Federal Reserve Board, alter the structure and other characteristics of the Federal Advisory Council, create a conference of Federal Reserve Bank Presidents and abolish the Federal Open Market Committee (S. 2648);[14]

8. provide the Federal Home Loan Bank Board with certain enforcement and regulatory powers including, in part, issuance of cease and desist orders relating to removal of a director or officer, appointment of a conservator or receiver, organization and other matters (S. 2677, H.R. 10748, and also H.R. 10494);

9. extend and improve the laws regulating companies which own savings and loan institutions insured by the Federal Savings and Loan Insurance Corporation (S. 2702, H.R. 10819);

10. permit Federal Savings and Loan Associations to raise additional capital by issuing shares of guaranty stock subordinated to the claims of creditors of the association and of holders of withdrawable savings accounts (H.R. 10495);

11. provide that the Federal National Mortgage Association shall exercise its special functions by purchasing mortgages on single-family dwellings for low-income families insured under the National Housing Act, in order to provide housing for slum dwellers who are not being provided decent, safe, and sanitary housing under the Federal urban renewal program (H.R. 10251);

12. permit the prepayment of F.H.A. insured mortgages without requiring the payment of an adjusted premium charge in certain cases involving nonprofit educational institutions (S. 2516);

13. provide that an individual who has a federally insured or guaranteed mortgage on his home, and who is required to move to a new location, may under certain circumstances transfer his equity in such home to another dwelling in the new location held by the Federal agency which insured or guaranteed such mortgage (H.R. 9984);

14. help provide adequate dwelling accommodations for more families who have low or moderate incomes, who are elderly, or who are subjected to the special problems of displacement from their homes by Government action; to promote orderly community development and growth; and amend laws relating to housing, urban renewal, and community facilities (S. 2468, 9751);

15. establish a system of loan insurance to assist students to attend institutions of higher education and post-secondary vocational schools (H.R. 10224);

16. provide that no educational institution which is participating in the National Defense Education Loan Act may also participate in or cooperate with any private educational loan program which is charging the student or parents an annual interest rate in excess of 9 percent inclusive of all costs incident to making a loan (S. 2591).

ROMAN J. GERBER
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[13] A similar bill (H.R. 8230) has been introduced in the House. A discussion of that bill appeared in *The National Banking Review*, 1, December 1963, p. 274.

[14] Another bill relating to changes in the Federal Reserve Board is reported in *The National Banking Review*, 1, March 1964, p. 438.

Current Banking and Economic Developments

I. *National Bank Income and Expenses*

During 1963, national banks shared in the general expansion of business, which, by late May 1964, exceeded in duration any expansion of the post-World War II period. Corporate profits after taxes rose by 12.2 percent for all corporations and 12.8 percent for national banks between the end of 1962 and 1963. Net income of national banks increased by 2.6 percent between 1961-1962, following a decline by .4 percent between 1960-1961.

To a considerable extent the more favorable earnings of national banks were associated with a larger increase in the money supply (currency plus demand deposits) during 1963 than in any of the last five years. In 1963, the money supply increased by almost 4 percent, a rate which has been sustained in the first 4 months of 1964.

Within the various components of the income and dividend reports of national banks were interesting movements reflecting factors familiar to bankers, students of banking, and financial analysts.

Current operating revenue of national banks rose to $7.3 billion at the end of 1963, a 10.7 percent rise over 1962. This percent increase was similar to the one for 1961-1962, and reflected, in part, shifts in the portfolios of banks to more loans and larger holdings of state and local securities. Interest and discount on loans accounted for 63 percent of current operating revenue, and interest on U. S. Government obligations for about 16 percent.

Current operating expenses of national banks rose by 13.3 percent in 1963 to $5.2 billion. In 1962, these expenses rose more rapidly—by 16.1 percent. In 1963, as in 1962, the expense that increased the greatest was interest on time and savings deposits (37.1 percent in 1962 and 20.7 percent in 1963). Percent increases in expenses other than interest costs (wages and salaries, occupancy expense, etc.) were greater in 1963 than in 1962.

In 1963, interest on time and savings deposits rose to 36.7 percent of current operating expenses as compared to 34.4 percent in 1962. Salaries and wages fell from 35.0 percent to 33.3 percent. There also were declines in fraction of expenses going for officer and employee benefits, interest on borrowed money, and occupancy expense.

Net current operating earnings, the difference between current operating revenue and expenses of national banks, were $2.1 billion for the year ending December 1963. This is a 4.7 percent rise from the previous year. Between 1961-1962, the increase in net current operating earnings was only .06 percent, and in 1960-1961 it declined by 3.3 percent. Net income before related taxes was $1.9 billion, or 7.8 percent above 1962.

The ratio for national banks of net losses to loans at the end of the year was .15 percent for 1963. This is not signifi-

cantly different from the .13 percent for 1962, .17 percent for 1961, or .20 percent for 1960. The yearly average for the period 1944-1963 is .10 percent.

The ratio for national banks of net losses to total securities at the end of the year was .07 percent for 1963. This was virtually unchanged in the last 2 years. The yearly average for the last 20 years is .19 percent.

The ratio of current operating expenses to current operating revenue for national banks has increased in each of the last 4 years: 64.4 in 1960; 66.8 in 1961; 70.0 in 1962; and 71.6 in 1963. The ratios of net income before dividends to capital accounts, cash dividends to capital stock, and cash dividends to capital accounts in 1963 were very similar to those for the years 1960-1962.

II. *Banking Structure*

There were 57 new national banks chartered in the first 3 months of 1964, the same number chartered in the last 3 months of last year, and 3 less than in the July 1-September 30, 1963, period. Of these 57 new banks, 8 were in California, where state-wide branch banking is permitted, and 11 each were in Florida and Texas, where unit banking prevails. The remaining 27 banks were chartered in 20 different states. No new national banks were chartered in 27 states, the District of Columbia, or the Virgin Islands during the period January 1-March 31, 1964.

De novo branch applications approved by the Comptroller of the Currency in the first quarter of 1964 numbered 160—about the same quarterly average as prevailed in the two previous quarters, and somewhat less than the quarterly average for the first half of 1963. California (17), Maryland (8), Massachusetts (7), Michigan (11), New York (12), Ohio (19), and Pennsylvania (16) continued to lead the states in the number of branches of national banks approved. During January-March 1964, 149 branches were actually opened for business. By March 31, 1964, there were 7,337 branches of national banks in operation, 135 more than on December 31, 1963; 14 existing branches were discontinued or consolidated between January 1 and March 31, 1964. In the previous quarter, October 1-December 31, 1963, there was a net increase of 339 in the number of branches of national banks.

Of the 149 branches of national banks authorized between January 1-March 31, 1964, 63 percent were in communities of less than 25,000 population. This is a slightly higher percentage than for either 1962 or 1963. Banks with less than $25 million of resources accounted for 27 percent of these 149 branches. This percentage is the same as in 1962 and 1963.

SHERMAN SHAPIRO
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Selected Statistical Data*

Table No.	*Title of Table*
1	Number of national banks and banking offices, by states, March 31, 1964
2	Status of applications for national bank charters, and charters issued: January 1–March 31, 1964
3	National bank charter applications and charters issued, by states, January 1–March 31, 1964: received, approved, rejected, abandoned, and pending as of March 31, 1964
4	*De novo* branch applications of national banks, by states, January 1–March 31, 1964: received, approved, rejected, abandoned, and pending as of March 31, 1964
5	Branches of national banks: in operation December 31, 1963, opened for business, discontinued, or consolidated, January 1–March 31, 1964, and branches in operation March 31, 1964
6	Branches of national banks authorized, by community size and size of bank, January 1–March 31, 1964
7	Mergers, January 1–March 31, 1964
8	Current operating revenue, and expenses, and dividends of national banks, by major categories and states, year ended December 31, 1963

* Data from the April 15, 1964, Reports of Condition of national banks were not available at the time this issue of *The National Banking Review* went to press. They will be included in the September 1964 issue of the *Review*.

Table 1.—Number of national banks and banking offices, by states, March 31, 1964

State	NATIONAL BANKS			Number of branches of national banks	Number of national banking offices‡
	Total	Unit	With branches		
United States†	4,654	3,503	1,151	7,337	11,991
Alabama	74	53	21	97	171
Alaska	5	0	5	38	43
Arizona	3	0	3	155	158
Arkansas	61	40	21	37	98
California	61	36	25	1,563	1,624
Colorado	106	106	0	0	106
Connecticut	23	8	15	135	158
Delaware	5	4	1	3	8
District of Columbia	7	2	5	38	45
Florida	170	170	0	0	170
Georgia	54	32	22	98	152
Hawaii	2	0	2	38	40
Idaho	10	4	6	84	94
Illinois	406	406	0	0	406
Indiana	123	67	56	225	348
Iowa	101	84	17	19	120
Kansas	167	143	24	24	191
Kentucky	83	45	38	102	185
Louisiana	45	17	28	118	163
Maine	22	8	14	61	83
Maryland	47	25	22	157	204
Massachusetts	93	39	54	279	372
Michigan	89	44	45	309	398
Minnesota	189	187	2	6	195
Mississippi	29	8	21	37	66
Missouri	86	74	12	10	96
Montana	47	47	0	0	47
Nebraska	122	105	17	17	139
Nevada	3	1	2	29	32
New Hampshire	51	48	3	5	56
New Jersey	145	53	92	353	498
New Mexico	32	16	16	40	72
New York	207	115	92	702	909
North Carolina	31	10	21	230	261
North Dakota	40	37	3	3	43
Ohio	217	102	115	426	643
Oklahoma	213	191	22	22	235
Oregon	11	7	4	190	201
Pennsylvania	405	260	145	644	1,049
Rhode Island	4	0	4	52	56
South Carolina	26	8	18	147	173
South Dakota	33	28	5	34	67
Tennessee	74	34	40	163	237
Texas	528	528	0	0	528
Utah	11	8	3	48	59
Vermont	28	19	9	25	53
Virginia	124	70	54	245	369
Washington	26	10	16	305	331
West Virginia	76	76	0	0	76
Wisconsin	104	94	10	22	126
Wyoming	34	34	0	0	34
Virgin Islands	1	0	1	2	3
D. C.—all*	14	2	12	73	87

* Includes national and nonnational banks in the District of Columbia, all of which are supervised by the Comptroller of the Currency.

† Includes Virgin Islands.

‡ Number of banking offices is the sum of total national banks and number of branches of national banks.

Table 2.—Status of applications for national bank charters, and charters issued: January 1—March 31, 1964

Applications carried over from December 31, 1963	70
4*—Conversion	
66*—Primary	
70	
Applications received January 1 to March 31, 1964	120
11—Conversion	
109—Primary	
120	
	190
Applications approved January 1 to March 31, 1964	52
10—Conversion	
42—Primary	
52	
Applications rejected January 1 to March 31, 1964	38
1—Conversion	
37—Primary	
38	
Applications abandoned January 1 to March 31, 1964	6
3—Conversion	
3—Primary	
6	
Applications pending as of March 31, 1964	94
1—Conversion	
93—Primary	
94	
	190
New National Banks chartered January 1—March 31, 1964	57

* Revised.

Table 3.—National bank charter applications and charters issued, by states, January 1—March 31, 1964: received, approved, rejected, abandoned, and pending as of March 31, 1964

State	Received*	Approved	Rejected	Abandoned	Pending Mar. 31, 1964	Charters issued
United States†	190	52	38	6	94	57
Alabama	5	3	1	0	1	1
Alaska	0	0	0	0	0	0
Arizona	0	0	0	0	0	0
Arkansas	2	1	0	0	1	1
California	33	9	11	1	12	8
Colorado	7	2	1	0	4	2
Connecticut	1	0	0	0	1	0
Delaware	0	0	0	0	0	0
District of Columbia	2	1	0	0	1	0
Florida	23	6	4	2	11	11
Georgia	4	1	0	1	2	0
Hawaii	0	0	0	0	0	0
Idaho	0	0	0	0	0	0
Illinois	9	4	1	0	4	2
Indiana	0	0	0	0	0	0
Iowa	0	0	0	0	0	1
Kansas	1	0	0	0	1	1
Kentucky	0	0	0	0	0	0
Louisiana	1	1	0	0	0	1
Maine	0	0	0	0	0	0
Maryland	1	0	0	0	1	2
Massachusetts	2	1	0	0	1	0
Michigan	4	1	0	0	3	2
Minnesota	6	1	1	0	4	0
Mississippi	2	2	0	0	0	1
Missouri	4	2	0	0	2	2
Montana	2	1	1	0	0	0
Nebraska	2	1	0	0	1	1
Nevada	2	0	0	0	2	0
New Hampshire	1	0	0	0	1	0
New Jersey	8	3	0	0	5	1
New Mexico	2	1	0	0	1	2
New York	5	0	1	0	4	1
North Carolina	0	0	0	0	0	0
North Dakota	1	1	0	0	0	1
Ohio	3	1	0	0	2	0
Oklahoma	16	2	10	2	2	1
Oregon	0	0	0	0	0	0
Pennsylvania	0	0	0	0	0	0
Rhode Island	0	0	0	0	0	0
South Carolina	2	0	0	0	2	0
South Dakota	1	0	0	0	1	0
Tennessee	0	0	0	0	0	0
Texas	25	4	7	0	14	11
Utah	2	1	0	0	1	1
Vermont	0	0	0	0	0	0
Virginia	2	0	0	0	2	2
Washington	3	0	0	0	3	1
West Virginia	2	0	0	0	2	0
Wisconsin	0	0	0	0	0	0
Wyoming	4	2	0	0	2	0
Virgin Islands	0	0	0	0	0	0

* Includes applications pending as of the end of 1963.
† Includes Virgin Islands.

Table 4.—De novo branch applications of national banks, by states, January 1—March 31, 1964: received, approved, rejected, abandoned, and pending as of March 31, 1964

State	Received‡	Approved	Rejected	Abandoned	Pending Mar. 31, 1964
United States†	346	160	37	12	137
Alabama	4	3	0	0	1
Alaska	0	0	0	0	0
Arizona	9	5	2	0	2
Arkansas	4	3	0	0	1
California	54	17	14	3	20
Colorado	0	0	0	0	0
Connecticut	4	3	0	0	1
Delaware	0	0	0	0	0
District of Columbia	3	0	0	0	3
Florida	0	0	0	0	0
Georgia	4	1	0	0	3
Hawaii	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	8	4	0	0	4
Iowa	2	0	0	0	2
Kansas	0	0	0	0	0
Kentucky	2	2	0	0	0
Louisiana	4	3	0	0	1
Maine	0	0	0	0	0
Maryland	19	8	5	1	5
Massachusetts	11	7	0	0	4
Michigan	30	11	4	0	15
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	1	1	0	0	0
Montana	0	0	0	0	0
Nebraska	0	0	0	0	0
Nevada	1	0	0	0	1
New Hampshire	7	6	1	0	0
New Jersey	15	6	1	2	6
New Mexico	0	0	0	0	0
New York	26	12	1	2	11
North Carolina	10	3	0	1	6
North Dakota	2	1	0	0	1
Ohio	29	19	0	1	9
Oklahoma	1	1	0	0	0
Oregon	12	6	4	0	2
Pennsylvania	26	16	1	0	9
Rhode Island	0	0	0	0	0
South Carolina	7	4	0	0	3
South Dakota	1	0	1	0	0
Tennessee	7	5	0	0	2
Texas	0	0	0	0	0
Utah	7	2	0	0	5
Vermont	3	2	0	0	1
Virginia	26	7	1	2	16
Washington	7	2	2	0	3
West Virginia	0	0	0	0	0
Wisconsin	0	0	0	0	0
Wyoming	0	0	0	0	0
Virgin Islands	0	0	0	0	0
D.C.—all*	5	1	0	0	4

* Includes national and nonnational banks in the District of Columbia, all of which are supervised by the Comptroller of the Currency.

† Includes Virgin Islands.

‡ Includes applications pending as of the end of 1963.

Table 5.—Branches of national banks: in operation December 31, 1963, opened for business, discontinued, or consolidated, January 1—March 31, 1964, and branches in operation March 31, 1964

State	Branches in operation Dec. 31, 1963	Branches opened for business Jan. 1-Mar. 31, 1964	Existing branches discontinued or consolidated, Jan. 1-Mar. 31, 1964	Branches in operation Mar. 31, 1964
United States†	7,202	149	14	7,337
Alabama	96	1	0	97
Alaska	38	0	0	38
Arizona	154	1	0	155
Arkansas	35	2	0	37
California	1,546	17	0	1,563
Colorado	0	0	0	0
Connecticut	132	3	0	135
Delaware	3	0	0	3
District of Columbia	35	3	0	38
Florida	0	0	0	0
Georgia	96	4	2	98
Hawaii	38	0	0	38
Idaho	84	0	0	84
Illinois	0	0	0	0
Indiana	218	7	0	225
Iowa	19	0	0	19
Kansas	24	0	0	24
Kentucky	101	2	1	102
Louisiana	118	0	0	118
Maine	61	0	0	61
Maryland	155	4	2	157
Massachusetts	271	8	0	279
Michigan	301	8	0	309
Minnesota	6	0	0	6
Mississippi	36	1	0	37
Missouri	12	0	2	10
Montana	0	0	0	0
Nebraska	17	0	0	17
Nevada	28	1	0	29
New Hampshire	2	3	0	5
New Jersey	343	10	0	353
New Mexico	40	0	0	40
New York	688	19	5	702
North Carolina	231	0	1	230
North Dakota	3	0	0	3
Ohio	422	4	0	426
Oklahoma	21	1	0	22
Oregon	190	0	0	190
Pennsylvania	615	30	1	644
Rhode Island	52	0	0	52
South Carolina	144	3	0	147
South Dakota	34	0	0	34
Tennessee	160	3	0	163
Texas	0	0	0	0
Utah	48	0	0	48
Vermont	22	3	0	25
Virginia	243	2	0	245
Washington	296	9	0	305
West Virginia	0	0	0	0
Wisconsin	22	0	0	22
Wyoming	0	0	0	0
Virgin Islands	2	0	0	2
D.C.—all*	70	3	0	73

* Includes national and nonnational banks in the District of Columbia, all of which are supervised by the Comptroller of the Currency.

† Includes Virgin Islands.

Table 6.—Branches of national banks authorized, by community size and size of bank, January 1—March 31, 1964

Category	January 1-March 31, 1964
In cities with population:	
less than 5,000	34
5,000 24,900	60
25,000 49,900	16
50,000 99,900	8
100,000 249,900	7
250,000 499,900	6
500,000 1,000,000	16
over 1,000,000	2
TOTAL	149
By banks with total resources (In millions of dollars)	
Less than $ 9.9	21
10.0 to 24.9	19
25.0 to 49.9	15
50.0 to 99.9	14
100.0 to 999.9	45
over 1,000	35
TOTAL	149

Table 7.—Mergers,* January 1—March 31, 1964

Applications carried over from December 31, 1963	14
Applications received January 1—March 31, 1964	25
Disposition of applications: January 1—March 31, 1964:	
Approved	18
Pending March 31, 1964	21
Transactions completed—Total	19
Mergers	12
Consolidations	4
Purchase of assets	3

The aggregate total of capital stock and capital accounts for certificates issued are as follows:

	Charter or purchasing bank	Merg., Consol. or selling bank	Combined
Capital stock	$101,583,495	$15,549,500	$119,941,815
Capital accounts	321,820,027	59,075,396	379,530,213

* Includes mergers, consolidations, and purchase and sale transactions where the emerging bank is a national bank.

Table 8.—Current operating revenue, and expenses, and dividends of national banks, by major categories and states, year ended December 31, 1963

(Dollar amounts in millions)

State	Number of banks[1]	CURRENT OPERATING REVENUE								
		Interest and dividends on securities		Interest and discount on loans	Service charges and other fees on bank loans	Service charges on deposit accounts	Other service charges, commissions, fees and collection and exchange charges	Trust department	Other current operating revenue	Total current operating revenue
		U.S. Government obligations	Other securities							
United States†	4,615	$1,171	$505	$4,622	$83	$409	$113	$261	$139	$7,302
Alabama	73	14	7	56	1	6	2	3	1	88
Alaska	5	2	‡	8	1	1	‡	‡	‡	13
Arizona	4	5	3	54	2	6	2	2	1	74
Arkansas	60	6	4	24	‡	2	1	1	‡	38
California	54	137	65	765	24	87	16	38	30	1,161
Colorado	104	14	4	58	1	7	2	5	1	91
Connecticut	23	7	5	49	1	5	1	6	1	76
Delaware	5	‡	‡	1	‡	‡	‡	0	‡	1
District of Columbia	7	11	1	27	1	3	1	2	1	46
Florida	161	37	12	99	3	13	3	7	3	177
Georgia	55	12	4	69	1	8	3	4	1	102
Hawaii	2	3	1	12	‡	1	‡	0	‡	17
Idaho	10	4	2	19	‡	3	1	‡	‡	30
Illinois	405	126	56	381	4	20	8	33	8	637
Indiana	124	32	8	96	1	8	2	5	2	156
Iowa	100	10	3	32	‡	3	1	1	1	52
Kansas	167	15	6	41	‡	5	1	1	1	69
Kentucky	83	11	4	32	1	3	‡	1	1	53
Louisiana	44	20	6	56	‡	5	2	1	2	92
Maine	22	3	1	14	‡	1	‡	1	‡	21
Maryland	46	13	4	44	2	4	1	2	1	70
Massachusetts	93	28	8	140	3	13	9	11	7	218
Michigan	87	53	22	171	2	12	4	9	3	277
Minnesota	188	27	10	101	1	9	6	8	2	162
Mississippi	29	4	2	15	‡	2	1	‡	‡	23
Missouri	84	20	7	67	‡	3	1	4	2	104
Montana	47	5	2	16	‡	2	1	‡	‡	26
Nebraska	121	10	3	42	‡	3	1	2	‡	63
Nevada	3	3	2	14	1	1	‡	1	‡	21
New Hampshire	52	2	1	13	‡	2	‡	‡	‡	20
New Jersey	144	40	24	146	2	15	3	8	3	241
New Mexico	30	5	1	19	‡	2	1	1	1	30
New York	211	101	61	468	8	32	10	27	31	738
North Carolina	31	8	4	43	2	5	2	2	‡	66
North Dakota	39	5	2	13	‡	2	1	‡	‡	22
Ohio	217	62	23	205	2	17	4	11	4	329
Oklahoma	211	23	7	76	1	8	1	2	1	120
Oregon	11	13	6	71	1	10	1	3	2	107
Pennsylvania	408	84	54	295	4	17	4	25	8	491
Rhode Island	4	3	3	20	‡	2	1	1	1	30
South Carolina	25	7	2	24	‡	3	1	1	‡	39
South Dakota	33	5	1	17	‡	2	1	‡	‡	27
Tennessee	74	21	8	85	1	5	2	3	1	127
Texas	519	84	31	320	4	20	6	13	7	486
Utah	10	3	2	21	1	2	1	1	‡	30
Vermont	28	2	‡	9	‡	1	‡	‡	‡	12
Virginia	123	18	8	81	1	7	2	4	1	124
Washington	25	21	8	97	2	14	3	5	3	152
West Virginia	76	10	2	23	‡	1	‡	1	‡	38
Wisconsin	104	21	6	62	1	4	1	3	2	100
Wyoming	34	3	1	11	‡	1	1	‡	‡	17
Virgin Islands	1	‡	‡	1		‡	‡	0	‡	1
D.C.—all*	14	19	3	54	1	6	1	5	1	89

* Includes national and nonnational banks in the District of Columbia, all of which are supervised by the Comptroller of the Currency.

† Includes Virgin Islands.

‡ Less than $500,000.

[1] Number of banks as of end of year, but figures of income, expenses, etc., include banks which were in operation a part of the year but were inactive at the close of the year.

Note: Data may not add to totals because of rounding.

Table 8.—Current operating revenue, and expense, and dividends of national banks, by major categories and states, year ended December 31, 1963—Continued

(Dollar amounts in millions)

State	CURRENT OPERATING EXPENSES												Net current operating earnings[3]
	Salaries and wages				Officer and employee benefits (pensions, hospitalization, social security, insurance, etc.)	Fees paid to directors and members of executive, discount, and other committees	Interest on time and savings deposits	Interest and discount on borrowed money	Net occupancy expense of bank premises	Furniture and equipment (depreciation, rents, servicing, unclassified costs, etc.)	Other current operating expenses	Total current operating expenses	
	officers		Employees other than officers										
	Amount	Number[1]	Amount	Number[2]									
United States†	$608	58,238	$1,131	287,498	$243	$31	$1,917	$20	$314	$174	$792	$5,229	$2,074
Alabama	8	805	14	4,118	3	‡	20	‡	3	2	11	60	28
Alaska	1	104	3	530	‡	‡	3	‡	1	‡	2	10	3
Arizona	7	633	13	3,206	3	‡	20	0	4	3	8	56	17
Arkansas	4	472	5	1,564	1	‡	8	‡	2	1	5	27	11
California	86	8,744	194	43,590	36	1	379	4	50	29	92	871	290
Colorado	9	888	14	3,754	3	1	24	‡	5	3	10	68	23
Connecticut	8	663	15	3,772	4	‡	12	‡	4	3	9	55	21
Delaware	‡	21	‡	62	‡	‡	‡	0	‡	‡	‡	1	‡
Dist. of Col.	4	322	8	1,884	1	‡	9	‡	2	1	5	31	15
Florida	17	1,723	31	8,846	5	1	40	1	8	6	23	132	45
Georgia	10	904	19	5,075	4	‡	15	1	6	3	15	73	28
Hawaii	2	126	2	650	1	‡	4	‡	1	1	2	13	4
Idaho	3	283	4	1,329	1	‡	7	‡	1	1	3	20	10
Illinois	44	3,659	87	20,649	23	3	192	1	22	11	62	444	193
Indiana	15	1,389	25	6,731	5	1	28	‡	7	4	21	107	48
Iowa	7	673	8	2,164	2	‡	11	‡	2	1	7	38	14
Kansas	9	990	9	2,537	2	1	13	‡	3	2	8	46	23
Kentucky	6	653	8	2,245	2	‡	10	‡	3	1	7	36	17
Louisiana	8	680	15	3,965	3	1	18	‡	5	2	14	65	27
Maine	2	227	4	1,103	‡	‡	4	‡	1	1	3	15	5
Maryland	6	610	12	3,455	2	‡	15	‡	4	2	9	50	20
Massachusetts	18	1,597	42	10,508	9	1	25	1	11	6	24	136	82
Michigan	16	1,273	45	11,391	9	1	95	‡	13	6	29	214	63
Minnesota	15	1,453	25	6,337	6	1	40	‡	7	4	18	116	46
Mississippi	2	249	3	962	1	‡	5	‡	1	1	3	16	7
Missouri	9	871	17	4,512	3	1	22	‡	5	2	12	71	33
Montana	3	303	4	1,003	1	‡	6	‡	1	1	4	19	7
Nebraska	8	809	9	2,535	2	1	9	‡	2	2	8	42	21
Nevada	2	226	4	964	1	‡	4	0	1	1	2	14	7
New Hampshire	2	265	3	925	1	‡	3	‡	1	1	3	14	6
New Jersey	19	1,776	41	10,851	8	2	69	‡	12	6	27	186	55
New Mexico	3	312	5	1,355	1	‡	6	‡	1	1	4	22	8
New York	46	3,689	114	26,121	31	2	209	3	37	14	71	527	211
North Carolina	7	752	12	3,616	2	‡	10	1	3	2	8	45	20
North Dakota	2	252	3	862	1	‡	6	‡	1	‡	2	16	6
Ohio	25	2,185	49	12,354	9	2	85	1	11	7	42	230	99
Oklahoma	14	1,495	15	4,476	4	1	24	‡	4	3	14	79	41
Oregon	11	1,205	17	4,225	3	‡	32	‡	5	3	10	81	26
Pennsylvania	37	3,806	68	17,339	15	3	147	‡	20	11	54	357	134
Rhode Island	2	179	4	1,208	1	‡	10	‡	1	1	3	22	8
South Carolina	4	470	8	2,342	2	‡	3	‡	2	1	5	25	14
South Dakota	3	349	3	1,000	1	‡	7	‡	1	1	3	19	9
Tennessee	10	1,038	18	5,097	4	‡	34	‡	5	3	15	89	38
Texas	47	4,647	61	16,425	13	3	111	3	18	11	65	332	154
Utah	2	214	4	1,055	1	‡	9	‡	1	1	3	20	10
Vermont	1	149	2	518	‡	‡	4	‡	1	‡	1	10	3
Virginia	11	1,294	18	5,303	4	1	32	‡	4	3	14	88	35
Washington	14	1,368	28	6,652	5	‡	36	‡	7	5	15	110	42
West Virginia	4	407	5	1,287	1	‡	9	‡	1	1	4	25	13
Wisconsin	9	820	15	4,219	3	1	27	‡	4	2	11	72	28
Wyoming	2	206	2	662	‡	‡	5	‡	1	1	2	13	5
Virgin Islands	‡	10	‡	65	‡	‡	‡	‡	‡	‡	‡	1	‡
D.C.—all*	7	570	15	3,507	2	1	18	‡	4	2	10	59	30

* Includes national and nonnational banks in the District of Columbia, all of which are supervised by the Comptroller of the Currency.
† Includes Virgin Islands.
‡ Less than $500,000.
[1] Number at end of period. Excludes building officers.
[2] Number of employees at end of period. Excludes building employees.
[3] Total current operating revenue less total current operating expenses.
Note: Data may not add to totals because of rounding.

Table 8.—Current operating revenue, and expenses, and dividends of national banks, by major categories and states, year ended December 31, 1963—Continued

(Dollar amounts in millions)

State	RECOVERIES, TRANSFERS FROM VALUATION RESERVES, AND PROFITS[1]							LOSSES, CHARGEOFFS, AND TRANSFERS TO VALUATION RESERVES[2]						
	On securities			On loans		All other	Total recoveries, transfers from valuation reserves, and profits	On securities			On loans		All other	Total losses, charge-offs, and transfers to valuation reserves
	Profits on securities sold or redeemed	Recoveries	Transfers from valuation reserves	Recoveries	Transfers from valuation reserves			Losses on securities sold	Charge-offs on securities not sold	Transfers to valuation reserves	Losses and charge-offs	Transfers to valuation reserves		
United States†	$88	$2	$45	$8	$105	$56	$304	$28	$6	$39	$13	$330	68	484
Alabama	1	‡	‡	‡	‡	1	3	‡	‡	‡	‡	4	1	6
Alaska	‡	0	0	0	‡	‡	‡	‡	0	0	0	1	‡	1
Arizona	‡	0	‡	0	0	‡	1	‡	0	‡	0	3	‡	4
Arkansas	1	‡	‡	‡	‡	‡	1	‡	‡	‡	‡	1	‡	2
California	10	‡	1	‡	0	11	22	1	1	2	‡	39	13	57
Colorado	1	‡	‡	‡	0	7	8	‡	‡	‡	‡	3	1	4
Connecticut	1	0	‡	‡	‡	‡	2	‡	‡	‡	‡	2	2	5
Delaware	0	0	0	‡	‡	‡	‡	0	‡	0	‡	0	‡	‡
Dist. of Col.	‡	0	0	‡	‡	‡	1	0	0	0	‡	3	‡	3
Florida	2	‡	‡	‡	‡	1	3	‡	‡	‡	1	8	1	11
Georgia	1	‡	‡	‡	‡	1	2	‡	‡	‡	‡	4	2	6
Hawaii	‡	0	0	0	0	‡	‡	‡	‡	0	0	‡	‡	‡
Idaho	‡	‡	0	‡	‡	‡	‡	‡	‡	‡	‡	1	‡	1
Illinois	12	‡	9	‡	2	2	25	4	1	9	1	33	4	51
Indiana	2	‡	2	‡	‡	1	5	2	‡	2	‡	6	3	13
Iowa	1	‡	‡	‡	‡	‡	1	‡	‡	‡	‡	2	1	3
Kansas	1	‡	‡	‡	‡	‡	1	‡	‡	‡	1	2	1	4
Kentucky	1	‡	‡	‡	‡	‡	1	‡	‡	‡	‡	2	1	3
Louisiana	1	0	1	‡	‡	1	3	‡	‡	‡	‡	4	1	6
Maine	‡	‡	‡	‡	‡	‡	1	‡	‡	‡	‡	1	‡	1
Maryland	‡	‡	‡	‡	‡	‡	1	‡	‡	‡	‡	3	1	4
Massachusetts	3	‡	‡	‡	4	2	9	1	‡	2	‡	12	5	20
Michigan	2	‡	‡	‡	2	3	6	5	‡	2	‡	10	3	20
Minnesota	1	‡	‡	‡	‡	1	2	‡	‡	‡	‡	4	1	6
Mississippi	‡	‡	‡	‡	‡	‡	1	‡	‡	‡	‡	1	‡	2
Missouri	2	‡	‡	1	‡	‡	4	‡	‡	1	‡	2	1	5
Montana	‡	‡	1	‡	‡	‡	2	‡	‡	1	1	1	‡	2
Nebraska	1	‡	1	‡			2	‡	‡	‡	‡	2	1	4
Nevada	‡	0	‡	‡	‡	‡	‡	‡	0	‡	‡	1	‡	1
New Hampshire	‡	1	‡	‡	‡	‡	1	‡	1	‡	‡	1	‡	2
New Jersey	3	‡	‡	‡	‡	1	5	1	‡	1	‡	9	1	13
New Mexico	‡	0	0	‡	‡	‡	1	‡	‡	‡	‡	2	1	3
New York	11	‡	20	‡	84	11	125	2	‡	7	‡	75	4	88
North Carolina	1	‡	‡	‡	‡	‡	1	‡	‡			2	1	3
North Dakota	‡	‡	‡	‡	‡	‡	‡	‡	‡	0	‡	1	‡	1
Ohio	4	‡	1	‡	2	1	9	1	1	3	‡	10	2	17
Oklahoma	1	‡	1	1	‡	‡	3	‡	‡	‡	1	5	‡	8
Oregon	1	0	0	‡	0	‡	2	3	0	1	‡	3	1	8
Pennsylvania	5	‡	4	‡	2	5	17	3	1	1	1	20	3	29
Rhode Island	1	0	0	‡	0	‡	1	0	0	1	‡	1	‡	2
South Carolina	‡	0	0	‡	‡	‡	1	‡	‡	‡	‡	1	1	2
South Dakota	‡	‡	‡	‡	‡	‡	1	‡	‡	‡	‡	2	‡	2
Tennessee	3	‡	‡	‡	2	‡	6	1	‡	‡	‡	5	3	9
Texas	5	‡	2	2	3	2	14	1	1	2	2	24	4	33
Utah	‡	0	0	‡	0	‡	‡	‡	0	0	0	1	‡	1
Vermont	‡	‡	0	‡	‡	‡	‡	‡	‡	0	‡	‡	‡	1
Virginia	1	‡	‡	‡	1	‡	2	‡	‡	‡	‡	5	1	7
Washington	1	‡	‡	‡	1	‡	3	‡	‡	‡	‡	5	1	6
West Virginia	1	‡	‡	‡	‡	‡	1	‡	‡	‡	‡	2	‡	2
Wisconsin	4	‡	‡	‡	‡	‡	4	‡	‡	‡	‡	2	‡	3
Wyoming	‡	‡	0	‡	0	‡	‡	‡	‡	‡	‡	‡	‡	1
Virgin Islands	0	‡	0	0	0	‡	‡	0	0	0	0	‡	‡	‡
D.C.—all*	1	‡	0	‡	‡	‡	1	‡	‡	‡	‡	3	1	4

* Includes national and nonnational banks in the District of Columbia, all of which are supervised by the Comptroller of the Currency.
† Includes Virgin Islands.
‡ Less than $500,000.
[1] Not including recoveries credited to valuation reserves.
[2] Not including losses chaged to valuation reserves.

Note: Data may not add to totals because of rounding.

Table 8.—Current operating revenue, and expenses, dividends of national banks, by major categories and states, year ended December 31 , 1963—Continued

(Dollar amounts in millions)

State	Net income before related taxes	Taxes on net income		Net income before dividends	Cash dividends declared			Net income after dividends	Capital accounts[1]	Ratios		MEMORANDA ITEMS			
												Recoveries credited to valuation reserves (not included in recoveries, p. 628)		Losses charged to valuation reserves (not included in losses, p. 628)	
		Federal	State		On common stock	On preferred stock	Total cash dividends declared			Net income before dividends to capital accounts	Total current operating expenses to total current operating revenue	On securities	On loans	On securities	On loans
										Percent	Percent				
United States†	$1,894	$637	$51	$1,206	$547	$1	$548	$658	$13,102	9.20	71.61	$5,306	$60,402	$11,867	$177,661
Alabama	24	8	1	15	7	0	7	9	165	9.09	68.18	0	919	23	2,727
Alaska	2	1	‡	1	‡	0	‡	1	13	7.69	76.92	5	264	0	603
Arizona	15	6	‡	8	4	0	4	4	86	9.30	75.68	0	648	0	2,614
Arkansas	9	3	0	6	2	0	2	4	73	8.22	71.05	0	299	11	831
California	255	88	22	145	89	0	89	55	1,501	9.66	75.02	540	7,205	142	24,951
Colorado	27	8	1	18	6	0	6	12	153	11.76	74.73	5	826	0	2,018
Connecticut	17	5	1	11	6	0	6	5	122	9.02	72.37	0	555	1	1,611
Delaware	‡	‡	‡	‡	‡	0	‡	‡	2	0	100.00	0	1	0	22
Dist. of Col.	12	5	0	7	4	0	4	3	86	8.14	67.39	0	182	0	881
Florida	37	14	0	23	10	‡	10	13	333	6.91	74.58	15	1,781	4	5,801
Georgia	25	10	0	15	7	0	7	8	172	8.72	71.57	26	698	29	2,931
Hawaii	4	2	‡	3	1	0	1	1	30	10.00	76.47	0	165	0	338
Idaho	9	3	1	5	2	0	2	3	42	11.90	66.67	0	61	0	231
Illinois	167	58	0	109	43	0	43	66	1,290	8.45	69.70	1,425	6,642	1,716	18,194
Indiana	40	17	0	24	10	0	10	14	301	7.97	68.59	0	1,380	93	4,047
Iowa	12	4	0	8	3	0	3	5	103	7.77	73.08	0	282	0	611
Kansas	21	7	0	13	5	‡	5	8	150	8.67	66.67	3	748	139	1,168
Kentucky	15	6	0	10	4	0	4	6	114	8.77	67.92	46	482	191	963
Louisiana	24	9	0	15	6	0	6	9	194	7.73	70.65	0	451	201	3,306
Maine	5	2	0	3	1	0	1	2	39	7.69	71.43	1	309	1	1,001
Maryland	17	7	0	10	6	0	6	4	131	7.63	71.43	0	757	168	851
Massachusetts	72	28	5	38	23	0	23	15	451	8.43	62.39	3	1,324	691	7,245
Michigan	49	12	0	37	17	‡	17	20	421	8.79	77.26	3	3,102	4,793	4,888
Minnesota	43	16	3	24	11	0	11	12	292	8.22	71.60	0	989	0	3,463
Mississippi	6	2	0	4	2	0	2	3	40	10.00	69.57	0	274	0	871
Missouri	33	13	1	19	7	0	7	12	227	8.37	68.27	0	351	140	1,509
Montana	6	2	0	4	2	0	2	2	37	10.81	73.08	28	216	0	447
Nebraska	19	8	0	11	5	0	5	7	126	8.73	66.67	0	576	4	1,121
Nevada	7	3	0	4	2	0	2	2	30	13.33	66.67	0	154	0	310
New Hampshire	6	2	0	3	1	0	1	2	39	7.69	70.00	2	188	0	532
New Jersey	46	13	0	33	16	‡	16	18	395	8.35	77.18	260	1,530	187	4,501
New Mexico	6	2	0	3	2	0	2	2	45	6.67	73.33	3	547	21	1,351
New York	247	48	8	191	51	1	52	129	1,383	13.81	71.41	724	8,098	192	29,195
North Carolina	18	8	‡	10	5	0	5	5	110	9.09	68.18	36	278	10	797
North Dakota	6	2	‡	4	2	0	2	2	33	12.12	72.73	0	72	0	181
Ohio	90	35	0	55	24	0	24	31	624	8.81	69.91	49	2,506	1,190	5,962
Oklahoma	36	13	1	22	9	0	9	13	260	8.46	65.83	0	751	1	4,663
Oregon	20	6	2	12	8	0	8	5	167	7.19	75.70	0	516	0	1,701
Pennsylvania	122	31	0	90	45	0	45	46	1,098	8.20	72.71	1,972	3,712	1,694	8,669
Rhode Island	7	2	1	4	3	0	3	1	49	8.16	73.33	0	122	0	361
South Carolina	12	5	‡	7	3	0	3	4	66	10.61	64.10	23	152	4	567
South Dakota	7	3	‡	4	2	0	2	3	37	10.81	70.37	2	162	0	372
Tennessee	34	14	0	20	8	0	8	12	235	8.51	70.08	0	556	0	2,449
Texas	135	56	0	79	41	0	41	38	1,004	7.87	68.31	85	6,374	75	13,911
Utah	9	4	‡	5	2	0	2	3	48	10.42	66.67	0	30	0	156
Vermont	2	1	‡	1	1	‡	1	1	22	4.54	83.33	0	92	0	238
Virginia	31	11	0	20	9	0	9	10	222	9.01	70.97	50	793	128	2,266
Washington	39	16	0	23	10	0	10	12	235	9.79	72.37	0	622	0	1,830
West Virginia	12	4	0	7	3	0	3	5	86	8.14	65.79	0	220	0	594
Wisconsin	29	11	1	17	8	0	8	9	188	9.04	72.00	0	1,232	0	1,389
Wyoming	4	2	0	3	1	0	1	2	30	10.00	76.47	0	200	18	398
Virgin Islands	‡	‡	0	‡	0	0	0	‡	2	0	100.00	0	8	0	24
D.C.—all*	27	12	0	14	7	0	7	7	147	9.52	66.29	0	305	0	1,238

* Includes national and nonnational banks in the District of Columbia, all of which are supervised by the Comptroller of the Currency.
† Includes Virgin Islands.
‡ Less than $500,000.
[1] Represents aggregate book value of capital stock, surplus, undivided profits, reserves, and retirement fund for preferred stock. Figures are averages of amounts reported for the June and December call dates in the current year and the December call date in the previous year.

Note: Data may not add to totals because of rounding.

BOOK REVIEWS

Branch Banking, Bank Mergers and the Public Interest. Prepared by the New York State Banking Department's Division of Research and Statistics. New York: 1964. Pp. 192. $1.00.

This study of branch banking and bank mergers is based on an examination of the comparative performance of branch and unit banks in New York State. The information for this study, which was conducted by the New York State Banking Department, was derived from a combination of call reports, various published materials, and questionnaires which were sent to all commercial banks in New York State.

The purpose of the study is to contribute to reasoned decision-making by state and federal bank supervisory agencies and legislatures by helping to fill part of the "information gap" which exists with respect to the effects of branch banking and bank mergers. As part of this effort, the author of the study tried to answer some of the questions which are involved in the controversy about branch and unit banking. Is it true that branch banks do not return locally generated deposits to the community which provided them? Do branch banks take a more impersonal attitude than unit banks towards lending? Are they less disposed than unit banks to make character loans and more inclined to demand collateral? Does out-of-town branch banking involve greater delays in authorizing loans which must be referred for head-office approval? Are large institutions best able to provide a wide and diversified range of services? Do branch banks bring banking facilities to places which might otherwise have remained bankless? How do loan rates and service charges compare at branch and unit banks?

The reader in a hurry can learn the answers to these and other questions from a 35 page supplement to the report which presents the summary and conclusions. In order to see these results in better perspective, the more serious readers will also want to examine the framework within which those answers were collected. This framework has many elements. An important conceptual problem which arises at the very outset of this kind of fact-finding investigation is how to define a branch bank. For example, should the information about a branch bank with only one branch which is located in the head-office city be averaged into the group data for all branch banks, for unit banks, or perhaps into a special category for branch banks with only a few branches? If there is to be a special category for branch banks with in-town branches, what should be done with branch banks with predominantly in-town branches but with some out-of-town branches? Should size differences be related primarily to dollar-size or to number of branches? There is a long list of such questions, and the way in which they are answered helps to determine the pattern of the factual findings.

In the present study, the commercial banks in the state were divided into the New York City banks and those which were outside of New York City. In the former, a further distinction was made between the "Major banks" (over $500 million in assets each) and "All other banks." Unfortunately for a study of the comparative performance of branch and unit banks, no distinction was made between branch and unit banks in New York City, because "there were too few New York City unit banks replying to the questionnaire to warrant a separate classification" (p. 4, n. 3). Banks outside of New York City were further divided into "Unit banks," "Major branch banks" ($100 million in assets or 10 or more offices each), "Branch banks with only in-town offices," and "All other branch banks" (p. 3). It will be noted that these breakdowns take some account of size differences among branch banks but not among unit banks.

The information about the banks in these bank categories was further subdivided because "the economic characteristics of different parts of New York State vary substantially" (p. 6). Accordingly, New York State was subdivided into New York City, major cities, suburban areas, urban areas of over

2,500 population (excluding major cities and suburban counties), and rural areas (i.e., the rest of the state not included in the other categories). The author carefully points out that these area classifications can only broadly approximate the actual differences in the economic characteristics of different parts of the state.

At repeated points throughout the study, the author has cautioned the reader about the limitations of his data, both conceptual and other limitations. These reminders are important and helpful, but they do not cover all of the pitfalls, and the reader will have to exercise care in using and interpreting the information in the tables. For example, in spite of the stress (in the early pages of the study) on the different economic characteristics of different parts of the state, several tables which compare the loan rates charged by various branch and unit bank categories (Tables 32, 33, 35, 36, 38, 39) ignore the area classifications and lump together all of the banks "Outside New York City." Clearly, the figures in these tables cannot provide valid comparisons on the comparative performance of branch and unit banks as such, because the effect on rates which is due to bank structure cannot be isolated from the effects due to different economic environments (including differences in demand, risk, costs, etc.).

Another source of difficulty in interpreting some of the tables is due to the author's failure to isolate the effects of different market structures. For example, even in those tables which do show comparative loan rates of branch and unit banks in terms of different area groupings (Tables 34, 37), it is not possible for the reader to find out how much of the comparative performance may have been due to a different market structure and how much was due solely to a different banking structure. The failure to isolate market structure effects could be serious in trying to identify the effects of bank structure as such, because most of the unit and some of the small branch banks were located in communities where they were the only lending or depository institution, whereas the New York City banks and all of the major branch banks were located in multi-lender communities. (Cf. p. 112, n. 44.)

Perhaps the most important question examined in this study is the relationship between bank mergers and the public interest. The author examined more than 200 mergers which took place between 1951 and 1961 and concluded that "the great majority of bank mergers in New York State during the period 1951 through 1961 have been, on balance, beneficial to the interests of the public . . . based on the criteria utilized in this study . . ." (p. 187). In this extremely important final conclusion, the author has gone beyond the declared purpose of filling the information gap; he has also evaluated his findings in terms of the public interest.

This evaluation is open to question on several counts. First, as the author himself points out, the data on which this conclusion is based can give only a rough approximation, since some of the information (especially about the premerger policies of the acquired bank) was based on estimates of the respondents. (Cf. p. 166.) In addition, replies were not received for about 50 of the 257 mergers which took place between 1951 and 1961.

Second, the conclusion is based on a questionable weighting procedure. The factual information about the immediate effects of mergers was based on a comparison of the premerger lending policies and pricing practices of the acquired banks, with the policies and practices at the same office immediately or shortly after it was converted into a branch (p. 166). In order to evaluate these changes in terms of the public interest, the author counted the number of beneficial changes and the number of detrimental changes, but he did not explicitly weight the changes because of the conceptual problems of trying to combine and weight criteria as diverse as an increase of ¼% in rates paid on savings deposits, a decline of four years in the maximum security on conventional mortgage loans, and the introduction of one new loan service (p. 169, n. 6). This is certainly a serious problem, but a decision not to introduce explicit weights does not get around this problem. It simply means that all of the changes were implicitly given equal weights.

Third, the author's evaluation of his finding was conditioned by the fact that he chose a particular list of criteria by which

to measure the beneficial and detrimental effects of mergers. Thus his findings depend partly on the particular mix of criteria and also on the total length of the list which he chose to use.

Fourth, the author's analysis of immediate merger effects did not identify the market structure effects of bank mergers on the ground that "such an analysis of each postwar merger is beyond the scope of the present study" (p. 165). Unfortunately, this makes it impossible for the readers to know whether the preponderance of favorable effects was due to an absence of unfavorable market structure effects from mergers, or would have taken place in spite of them. In this connection, it may be pertinent to note that the choice of alternative banking facilities within the same community was not affected in over 90% of the mergers outside of New York City (p. 165, n. 2).

Fifth, the author's failure to distinguish market structure effects of mergers also raises questions about his analysis of the over-all effects (including both immediate and long-range effects) of mergers. That analysis rests on the assumption that the policies of the head office of the acquiring bank will sooner or later be put into effect at the acquired branch. However, at a different point in this study, the author had remarked on the fact that the "merger-acquired branches which reported policies different from their respective head offices generally had *more restrictive policies* than head office . . ." and, he continued: *"The absence of competing institutions in almost all of these communities may have been a contributory factor to the maintenance of such policies."* (P. 20, my italics.)

Finally, the analysis of long-run effects of mergers in this study leaves unanswered a very important question: Since the postmerger behavior of acquired banks is related to the fact that large branch systems are under pressure to offer the same terms in the local markets of metropolitan areas and in the local markets of lesser urban areas in the state, would the postmerger behavior in the latter markets be affected if mergers should significantly raise the market concentration of the former?[1]

The difficulties with which this study has had to struggle should not obscure the fact that it has added measurably to our stock of knowledge about the behavior of branch banks. It deserves the serious attention of all who are concerned with problems of the banking structure.

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Money and Capital Markets. By ROLAND I. ROBINSON. New York: McGraw-Hill, 1964. Pp. iv + 371. $8.50.

Money and Capital Markets is a college text for courses in finance. It is not as long as the standard texts, and the author has intended that it be used in conjunction with other reading materials. Despite some shortcomings, this is a text which should provide the basis for an interesting college course on not too advanced a level.

One of the unique features of the book is that the author has outlined the use of much supplementary material. Part II on "The Money Market" consists of only three chapters and is incomplete unless used with the following suggested publications: C. H. Madden, *The Money Side of the Street;* R. V. Roosa, *Federal Reserve Operations in the Government Securities Market;* Board of Governors of the Federal Reserve System, *The Federal Funds Market;* and the Federal Reserve Bank of New York's three booklets, *Money Market Essays, Bank Reserves,* and *The Treasury and the Money Market.* The other sections of the text are complete in themselves, but the author also recommends use of the Federal Reserve Bank of New York's *Monthly Bulletin,* the financial pages of a large newspaper, and other selected materials.

The introduction consists of five chapters on "Economic Forces at Work in Money and Capital Markets." The chapters cover

[1] I have elsewhere speculated on the nature and consequences of the pressures for uniformity in large branch systems and their relation to market structures. For a further discussion of this point, cf. my "Role of Competition in Banking," a Report submitted to the Governor's Commission on Banking in California, December 1, 1963, pp. 46-51.

such topics as investment, saving, the investment policies of financial institutions, flow of funds accounting, and the variability and structure of interest rates. The subject matter is not rigorously treated, and conclusions are frequently presented with little analysis to support them. The author does not carefully distinguish between such concepts as the supply and demand for money, sources and uses of funds, and saving and investment, even though the discussion is in these terms.

Part III on "Capital Markets" is the most useful part of the text. In includes chapters on the markets for corporation stock, corporation bonds, state and local government securities, mortgages, and consumer credit. Good introductory material on these markets has not been readily available. The principal characteristics of each of these markets are described clearly and simply.

Part IV is entitled "The Dynamics of Money and Capital Markets" and consists of chapters on some of the basic characteristics of financial markets—the cyclical variations in stock prices, bond prices, and money market rates, forecasting, competition among financial institutions, new developments in money and capital markets, and the interrelationships with foreign markets.

From 1956 to 1961 the author was economic adviser to the Board of Governors of the Federal Reserve System. Although he might have provided some new insights into the operation of the Federal Reserve System, the book is disappointing in this respect. The author writes that the Federal Reserve System has attempted to follow a "fully countercyclical policy in its regulation of bank reserves" and that " the performance over all has been good" (p. 288). The evaluation of recent Federal Reserve policy by many others has not been so complimentary. Robinson does not explain why he believes monetary policy has been countercyclical even though the postwar recessions in 1949, 1958, and 1960 were characterized by prior or current absolute reductions in the money supply, and there was relatively small growth of currency and demand deposits in the recession of 1953. Also, the author does little to clear up the uncertainty concerning the role of free reserves in the system's technique of control. He writes that the free reserves concept "remains an excellent index of the availability of reserves to banks," even though "this measure seems to have receded as a guide for policy action and probably deservedly so" (pp. 129-30).

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Models of Income Determination, Volume Twenty-eight of *Studies in Income and Wealth*. For the National Bureau of Economic Research. Princeton, New Jersey: Princeton University Press, 1964. Pp. 427. $10.00.

Volume 28 of the *Studies in Income and Wealth* brings together nine papers dealing more or less directly with models of income determination. The first two describe and discuss "complete" econometric models for an entire economy. Lawrence R. Klein presents a comprehensive short-run model of the American economy, consisting of 29 structural equations with the parameters estimated from quarterly data, 1948 through 1958. T. M. Brown offers a more modest system—a model of the Canadian economy comprised of nine structural equations and numerous identities. The coefficients are estimated from annual data, 1926-41 and 1946-52. Both models were used to make forecasts beyond the terminal sample date, and both yielded promising but far from perfect predictions.

The next four papers are concerned with sectors of the economy, subsets of the more comprehensive theoretical systems. Jean Crockett examines income and asset effects upon consumption, centering upon the relative usefulness of cross-section and time series data to separate "permanent" and "transitory" components of income, one to measure accurately asset effects and their interaction with income effects. Robert Eisner compares a distributed lag accelerator with lagged or current profits to explain investment in plant and equipment. He finds the acceleration principle more satisfactory on the whole. Michael C. Lovell concentrates upon the determinants of inventory investment, stressing the importance of unfilled orders. The Federal or public sector is in-

vestigated by Wilfred Lewis, Jr. In his paper he suggests hypotheses and presents results bearing upon the interrelation between the public and private sectors of the economy.

Of the last three papers, two are primarily directed toward the development and application of empirical data. The study by Irwin Friend and Robert C. Jones employs anticipatory data in making forecasts, and the authors conclude that for short-run forecasting simple small-scale models are likely to do at least as well as more complex large-scale models. Zvi Griliches contributes a critical analysis of price data with special reference to his method for measuring quality changes in products. The third paper in this group, by Albert Ando, is somewhat different. It traces the theoretical implications and estimates the parameters of several growth models.

It seems superfluous for a reviewer to attempt any critical evaluation of the individual papers. Comments by at least one discussant, and replies by the author, are included at the end of each essay. In these criticisms few points have been missed. Imperfect data, improper degree of aggregation, inadequate definitions of variables, questionable equation forms, failure to consider alternative methods—everything short of triviality—has been covered in connection with one or the other paper. As usual, one's overall impression is that each participant deems all the research efforts as promising if only their authors would go about it the way he himself would. But I suppose this is the hard way to improvement, perhaps even to truth.

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